

NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF AVIATION SAFETY
WASHINGTON, D.C.

March 24, 2001

SYSTEMS AND POWERPLANTS GROUP CHAIRMAN'S FACTUAL
REPORT OF INVESTIGATION

A. ACCIDENT : MIA99FA245

LOCATION: Palm Beach International Airport, West Palm Beach,
Florida

DATE: September 3, 1999

TIME : 0335 Eastern Standard Time (EST)

AIRCRAFT : Beachcraft B90 King Air, N338AS, Operated by CP
Horizons, Inc.

B. GROUP MEMBERS

Group Chairman	Ronald C. Price National Transportation Safety Board Washington, D.C.
Member	Thomas A. Berthe Pratt and Whitney Canada Longueuil, Quebec, Canada
Member	Harold R. Barrentine Raytheon Aircraft Company Wichita, Kansas

C. SUMMARY

On September 3, 1999, at 0327 EST, a Beachcraft B90 King Air, N338AS, serial number LJ-493, was destroyed by impact forces and post crash fire when it crashed into a building and came to rest in a cluster of trees ½ mile short of runway 13 at the Palm Beach International Airport, West Palm Beach, Florida. The airplane was being operated as a CFR Part 91 flight that originated from Pontiac, Michigan. The flight was filed under IFR and was enroute to the Boca Raton airport when the pilot requested an immediate approach to Palm Beach. ATC gave the aircraft a visual approach to runway 13. Shortly thereafter, the pilot transmitted a mayday call, then crashed. A witness stated that the engine sounds were changing just before the crash. The pilot, student rated/passenger¹, and seven passengers were fatally injured.

The Systems/Powerplants Group was formed to record and document the pertinent information regarding the airplane systems and powerplants. The group began its investigation on September 3, 1999 and concluded the on-site/hangar investigation on September 5, 1999.

D. DETAILS OF THE INVESTIGATION

1.0 DAMAGE

The aircraft was destroyed by impact forces and post crash fire. The airplane's left wing and empennage were broken from the fuselage but remained attached by cables. No airplane parts were found before the initial impact point. All of the airplane was accounted for at the accident site. The airplane was found inverted with the left wing folded along the fuselage and the empennage rotated 180 degrees about the longitudinal axis and to the left of the fuselage. The nose wheel assembly and strut were found in the building and the right main tire was found near the building's front. There was no evidence of metal splattering, soot streaking, or heat damage along any horizontal plane. All of the heat damage was vertical and melted metal found directly beneath the fuselage.

2.0 HISTORY

The aircraft records indicated that it was manufactured in 1970 by Beachcraft

¹ The owner/operator of the airplane held a third class medical license and was occupying the right seat of the single pilot turbo-prop airplane.

Aircraft Company. The available aircraft records indicated that the airframe had accumulated about 8,996 flight hours and about 7,510 cycles. The airplane was owned by CP Horizon Corporation. The airplane records obtained from the FAA indicated that it had been exported to France in 1993, returned in 1995, exported to South America in 1995, then returned in February 1999. The maintenance records indicated that an annual inspection had been performed in February 1999 along with extensive maintenance² that was performed from February 1999 through June 1999. A new airworthiness certificate was issued by the FAA in February 1999.

3.0 AIRFRAME

The airplane was found inverted with its right wing resting on a fence. The fuselage was found fire damaged with the floor of the cabin consumed by fire. The main landing gear assemblies were found in the extended position but the struts including the wheel assemblies were separated from the main cylinders. The nose gear strut cylinder and extension assembly was separated from the fuselage attach points and in an extended position. The nose gear strut and wheel assembly were separated from the strut cylinder. The radar assembly and its mounting points were separated and found with the nose gear structure assembly near the front of the fuselage. The lower forward fuselage was crushed from the nose radome aft to the wing root. The remainder of the lower forward fuselage was 50% consumed by fire and torn from the fuselage during recovery.

3.1 AIR/PNEUMATICS

The airplane's air/pneumatic systems were found separated into the sections of the airframe. No evidence of failures or in-flight malfunctions were found. The outflow valves were found in the open position with no sooting or other malfunctions evident. The valves were integral to the aft bulkhead structure and exhibited no damage. The cabin air ventilation supply lines were found separated with the sections of the airframe and had major fire damage to the outside surface throughout the cabin area. The ventilation supply system did not have fire damage in other areas either inside or outside surfaces. No soot was found in the ventilation system.

The compressor/blower was found separated but near its attach points. The blower was found with no evidence of heat damage, sooting, or evidence of malfunction during flight. The combustion heater was found severely impact

² For details of the maintenance see appendix C.

damaged with no evidence of in-flight fire or overheat. There was no evidence of fuel leakage in or around the heater. The ducting was crushed and separated from the heater exhaust. There was heat damage around the separated exhaust ducting.

3.2 Air Conditioning

The air-conditioning assemblies were destroyed in the impact sequence. The compressor assembly was examined for evidence of over heat, none was found. The air conditioning system was not integral to the structure of the airframe, arcing or in-flight failures or malfunctions was not found. The combustion heater was examined for evince of over heating or in-flight failure. None were found. The heater was destroyed by impact forces.

3.3 Doors

The door was found locked and in place in the fuselage. The door locking mechanism functioned normally during the on-scene examination. The emergency exit of the airplane was integral to the structure. The top 50% was integral to the fuselage and the locking lugs were inplace and locked. The emergency exit was half consumed by fire.

3.4 FUEL SYSTEM

The Beechcraft King Air B90 fuel system consists of ten individual fuel tanks interconnected to supply fuel to the two turbines. There are five tanks in each wing that combine to provide fuel to each respective engine. The two separate systems are connected by a crossfeed valve. The valve is operated electrically by the pilot or automatically when the fuel pressure in either system drops. There are electric boost pumps in each nacelle tank and electric transfer pumps in each wing. The nacelle tanks have 61 usable gallons and the wing tanks have 131 gallons. There is a total usable fuel quantity of 384 gallons. There is some unusable fuel in each tank.

The nacelle tank for each engine is considered the main fuel tank. During flight, each main tank supplies fuel to its respective engine. The crossfeed valve is used to supply fuel from one system to both engines. Check valves in the fuel lines prevent fuel from being transferred from one side fuel system to the other. There are firewall fuel shutoff valves for each engine.

The airframe fuel system was examined for evidence of failures, malfunctions

or contaminates. The left nacelle, main, and right nacelle tanks had been breached and a faint odor of fuel was left near the resting place of the tanks. About two gallons of fuel was recovered from the right nacelle tank. The fuel was straw colored, clear, and free of extensive particles. There was no evidence of fuel staining or discoloration aft of any fuel components or caps. There was no evidence of fuel leak in the engine compartments. The fuel panel was examined for switch position. The upper outer switches were in the up position. The inner upper switches were in the down position. The lower switch was in the full up and locked position. The upper center switch was in the neutral position.

3.5 ELECTRICAL

The electrical systems of the airplane were destroyed by impact and post crash fire. The airplane's lead acid battery was found intact with no damage, no arcing, and no evidence of over temperature. The associated wiring in the battery compartment was not damaged and was intact with no evidence of arcing.

The nacelle electrical leads in both engine compartments aft of the firewall were examined and did not exhibit any evidence of over heating, arcing, or chafed insulation. The wiring in both wings was examined and did not exhibit any arcing. The wiring in the fire damaged areas of the airplane were examined for arcing, in-flight failures, or malfunctions. None were found.

The wiring throughout the cabin area was characterized by fire damaged wires, missing insulation, and melted terminal blocks. No evidence of in-flight failures were found. The circuit breakers were fire damaged and did not exhibit any arcing from the wiring supply to the structure.

3.6 FLIGHT CONTROLS

The flight controls were found in their respective attach areas throughout the structure of the airframe. The ailerons were integral to their respective attach areas except the outboard hinge on the right aileron was torn from its mounting structure consistent with the structural deformity of the wing. The elevators and rudder were integral to their respective mounting points except for the right hand outboard elevator was bent consistent to the deformity of the horizontal stabilizer.

The control cables were loose throughout the airframe but the cables were followed along their respective paths from the control points in the cockpit to the flight surface. No major flight control cable was broken. The trim cables were followed and the trim cables to the empennage were found torn, however, the trim positions of the cockpit controls matched the trim positions of the tabs. None of the trim tabs were found at other than neutral position.

The flaps were found in the up position. Portions of the flap drive system in the cabin floor area was consumed by post crash fire.

3.7 COCKPIT INSTRUMENTS

The cockpit instruments were found integral to their respective mounting structure and had soot covering the outside glass instrument faces. The engine instruments were indicating zero with the exception of the left fuel flow gauge which indicated about 280 pounds per hour. The flight instruments indicated that the airplane heading was 130 degrees, airspeed zero, altitude 50 feet, and an attitude of pitch level with a 15 degree left bank. The fuel quantity gauges indicated zero.

The engine control levers were generally forward. The condition levers were found full forward. The left propeller lever was slightly aft of the right which was found full forward. The power levers were found with the right full forward and the left slightly aft of full forward.

4.0 POWERPLANTS

4.1 LEFT ENGINE

The left engine is a Pratt and Whitney PT6A-20, serial number PCE-20801. According to the aircraft maintenance records the engine total time in service was 24, There were no reported malfunctions. The engine could not be rotated by hand. The engine was retained for examination at the manufacturer's facility.

4.2 RIGHT ENGINE

The right engine is a Pratt and Whitney PT6A-20, serial number PCE-20801. There were no reported malfunctions. The engine could not be rotated by hand.


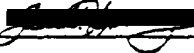
5.0 TESTS AND RESEARCH

The airplane had departed Pontiac, Michigan (PTK) enroute to Boca Raton (BCT), a trip of about 950 nautical miles. According to the FAA, the enroute time was about 4.9 hours. The airplane had departed about 1.4 hours after its proposed time. The pilot initiated planned enroute flight time on the FAA flight plan was 5 hours and the planned fuel on board was 6 hours. The airplane had been weighed in February 1999 and its empty weight was measured to be 6,255 pounds. The weight of the passengers, pilot, and baggage was measured to be 1,544 pounds. The airplane's maximum gross weight was limited to 9,650. Calculations showed that full fuel weight would have been about 2,573 pounds. The pilot had 282 gallons of fuel added in PTK. According to the airplane's flight manual, the fuel flow at 15,000 feet cruising altitude at 218 true airspeed would be about 525 lbs/hr. The airplane flight manual indicated that the time to climb and fuel used would have been 24 minutes and 220 pounds respectfully. According to the refuelers, the fuel tanks were full after being serviced at PTK. Sample calculations indicate that the fuel burn rate would have caused the airplane to use 2,576 pounds of Jet A turbine fuel during the flight. See appendix C for a report of the forecast cruise winds from PTK to PBI. The sample calculations do not consider performance degradation for operating the airplane above the maximum allowable gross weight. Calculations of the maximum allowable fuel that could be on board the aircraft showed that only 1851 pounds of turbine fuel could be carried to start the flight at the maximum allowable weight.

Ronald C. Price
Aerospace Engineer

APPENDIX A

AIRWORTHINESS DOCUMENTS

NATIONALITY AND REGISTRATION MARKS N338AS		AIRCRAFT SERIAL NO. LJ493	
MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT BEECH B90 ICAO Aircraft Address Code: 50731630			
I S S U E D T O	JODA PARTNERSHIP 14323 S OUTER FORTY DR STE 120 S TOWN & COUNTRY MO 63017		This certificate is issued for registration purposes only and is not a certificate of title. The Federal Aviation Administration does not determine rights of ownership as between private persons.  U.S. Department of Transportation Federal Aviation Administration
	PARTNERSHIP		
It is certified that the above described aircraft has been entered on the register of the Federal Aviation Administration, United States of America, in accordance with the Convention on International Civil Aviation dated December 7, 1944, and with the Federal Aviation Act of 1958, and regulations issued thereunder.			
DATE OF ISSUE February 23, 1999		ADMINISTRATOR: 	

AC Form 8050-3(8/97) Supersedes previous editions

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION
STANDARD AIRWORTHINESS CERTIFICATE


1 NATIONALITY AND REGISTRATION MARKS N338AS	2 MANUFACTURER AND MODEL Beech Aircraft Corp. B90	3 AIRCRAFT SERIAL NUMBER LJ-493	4 CATEGORY Normal
5 AUTHORITY AND BASIS FOR ISSUANCE This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein. Exceptions None			
6 TERMS AND CONDITIONS Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.			
DATE OF ISSUANCE April 19, 1999		DESIGNATION NUMBER DAR-47-FS-SO	

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA Form 8100-2 (8-82) * U.S. GPO: 1989-662-877

Date: April 14, 1999 Reg. #: N338AS
 Total Time: 8,756.1 hrs. Make: BEECHCRAFT
 Tach/ Hour Meter: 1,325.4 Model No: B90
 Serial No.: LJ-493

I find that this AIRCRAFT meets the requirements
 for the certification requested and have issued a Standard
 Certificate of Airworthiness dated 04/19/99
 The next Annual Inspection is due 04/19/00

Signed: 
 Robert R. Carrada
 F.A.A. Designated Airworthiness Representative
 No. DAR-47-FS-SO

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

STATEMENT OF CONFORMITY

SECTION I - AIRCRAFT

1. MAKE Beech Aircraft Corp.	2. MODEL B90
3. SERIAL NO. LJ-493	4. REGISTRATION NO. N338AS

SECTION II - ENGINE

1. MAKE Pratt & Whitney	2. MODEL PT6A-20
3. SERIAL NO. Left: PCE-20801 & Right: PCE-22008	

SECTION III - PROPELLER

1. MAKE Hartzell Propeller Co.	2. HUB MODEL HC-B3TN-3B
3. BLADE MODEL T10173B-8R	4. HUB SERIAL NO. Left - BUA19506 & Right - BU10988
5. BLADE SERIAL NOS.	

SECTION IV - CERTIFICATION

I hereby certify that:

- ☐ A. I have complied with Section 21.33(a).
- ☒ B. The aircraft described above, produced under type certificate only (FAR 21 Subpart F), conforms to its type certificate, is in a condition for safe operation, and was flight checked on 04/05/99
(Date)
- ☐ C. The engine or propeller described above, presented herewith for type certification, conforms to the type design therefor.
- ☐ D. The engine or propeller described above produced under type certificate only (FAR 21 Subpart F), conforms to its type certificate and is in a condition for safe operation. The engine or, if applicable, the variable pitch propeller was subjected by the manufacturer to a final operational check on _____
(Date)

Deviations:

SIGNATURE OF CERTIFIER Anthony Irwin	TITLE Certificated A&P Mechanic
ORGANIZATION Avalon Aviation	DATE April 19, 1999

U.S. Department of Transportation Federal Aviation Administration		APPLICATION FOR AIRWORTHINESS CERTIFICATE		INSTRUCTIONS — Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use an attachment. For special flight permits complete Sections II and VI or VII as applicable.							
I. AIRCRAFT DESCRIPTION	1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3. AIRCRAFT MODEL DESIGNATION	4. YR. MFR	FAA CODING						
	N338AS	Beech Aircraft Corp.	B90	1970							
	5. AIRCRAFT SERIAL NO.	6. ENGINE BUILDER'S NAME (Make)	7. ENGINE MODEL DESIGNATION								
	LJ-493	Pratt & Whitney	PT6A-20								
	8. NUMBER OF ENGINES	9. PROPELLER BUILDER'S NAME (Make)	10. PROPELLER MODEL DESIGNATION		11. AIRCRAFT IS (Check if applicable)						
	2 (two)	Hartzell Propeller Co.	HC-83TN-38/T101738-8R		IMPORT						
II. CERTIFICATION REQUESTED	APPLICATION IS HEREBY MADE FOR: (Check applicable items)										
	A	1	X	STANDARD AIRWORTHINESS CERTIFICATE (Indicate category)	X	NORMAL	UTILITY	ACROBATIC	TRANSPORT	GLIDER	BALLOON
	B	SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)									
		2	LIMITED								
		5	PROVISIONAL (Indicate class)	1	CLASS I						
				2	CLASS II						
		3	RESTRICTED (Indicate operations to be conducted)	1	AGRICULTURE AND PEST CONTROL	2	AERIAL SURVEYING	3	AERIAL ADVERTISING		
				4	FOREST (Wildlife conservation)	5	PATROLLING	6	WEATHER CONTROL		
				7	CARRIAGE OF CARGO	8	OTHER (Specify)				
		4	EXPERIMENTAL (Indicate operations to be conducted)	1	RESEARCH AND DEVELOPMENT	2	AMATEUR BUILT	3	EXHIBITION		
				4	RACING	5	CREW TRAINING				
				6	TO SHOW COMPLIANCE WITH FAR						
		5	SPECIAL FLIGHT PERMIT (Indicate operation to be conducted, then complete Section VI or VII as applicable on reverse side)	1	FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE OR STORAGE						
				2	EVACUATE FROM AREA OF IMPENDING DANGER						
				3	OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT						
			4	DELIVERING OR EXPORT	5	PRODUCTION FLIGHT TESTING					
			6	CUSTOMER DEMONSTRATION FLIGHTS							
C	6	MULTIPLE AIRWORTHINESS CERTIFICATE (Check ABOVE Restricted Operation and Standard or Limited as applicable)									
III. OWNER'S CERTIFICATION	A. REGISTERED OWNER (As shown on certificate of aircraft registration)		IF DEALER, CHECK HERE →								
	NAME		ADDRESS								
	Joda Partnership		14323 S. Outer Forty Dr., Ste 120 S Town & Country, MO 63017								
	B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)										
	X	AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No. and Revision No.)	X	AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give latest AD No.)							
		3A20 rev. 56		BI-Weekly rev. # 99-06							
		AIRCRAFT LISTING (Give page number(s))	SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated)								
		N/A	STCs # SA615EA & SA2569WE								
	C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS										
	X	CHECK IF RECORDS IN COMPLIANCE WITH FAR 100.117	TOTAL AIRFRAME HOURS	3	EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed)						
	91.417	8,756.1 hrs.		N/A							
D. CERTIFICATION — I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.											
DATE OF APPLICATION		NAME AND TITLE (Print or type)		SIGNATURE							
April 19, 1999		ANTHONY IRWIN AGENT									
IV. INSPECTION AGENCY VERIFICATION	A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete this section only if FAR 21.183(u) applies)										
	2	FAR PART 121 OR 127 CERTIFICATE HOLDER (Give Certificate No.)	3	CERTIFICATED MECHANIC (Give Certificate No.)	6	CERTIFICATED REPAIR STATION (Give Certificate No.)					
			X	108665148							
	5	AIRCRAFT MANUFACTURER (Give name of firm)									
	DATE	TITLE		SIGNATURE							
	April 19, 1999	Certificated Mechanic (A&P)		Anthony Irwin							
V. FAA REPRESENTATIVE CERTIFICATION	(Check ALL applicable blocks in items A and B)		X THE CERTIFICATE REQUESTED								
	A. I find that the aircraft described in Section I or VII meets requirements for		AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE								
	B. Inspection for a special flight permit under Section VII was conducted by:		FAA INSPECTOR								
			X FAA DESIGNEE								
			CERTIFICATE HOLDER UNDER:								
	DATE	DISTRICT OFFICE	DESIGNED AIR MAIL LINE AND NO.		FAA INSPECTOR'S SIGNATURE						
	04/19/99	Ft. Lauderdale F.S.D.O. # 17	Robert R. Cernuda, DAR-47-FS-SQ								

Make:Beechcraft **Model:** B90 **Serial Number:** LJ-493 **Date:** 5 April 1999

Total Time: 8756.1 **Hobbs:** 1325.4 **Total Landings:** 7440 **Registration :**N338AS

Performed Annual inspection of Aircraft in accordance with Beech Inspection Program. Progressive, and or Continuous Airworthiness inspection records were taken into considerations well as FAR 43 Appd D. Complied with Aileron Detailed Inspection Removed and re-installed overhauled primary propeller governor P/NA210578 S/N 2184033R from left hand engine after overhaul by EMI and primary propeller governors P/N A210578 S/N 2246039R from right hand engine after overhaul by EMI. Removed and re-installed over speed propeller governor P/N A210507 S/N 14761110 from left hand engine after overhaul by EMI and over speed propeller governor P/N A210507 S/N 1298750U-V after overhaul by EMI. Removed and replaced oxygen cylinder with new part number 3HT1850 S/N serial number 1A564508P. Removed and replaced L/H engine prop cable/N 55-4853-2094 with new. Removed and replaced right hand brake assembly with overhauled unit P/N 50-300010-119 S/N A3583 Removed and replaced left hand brake assembly with overhauled unit P/N 50-300010-119 S/N B4182. Removed and replaced air conditioning exhaust fan duct P/N 50-380047 with new. Removed and replaced right and left hand throttle ice protection boots P/N AD964-2 with new. Replaced bushings on left hand main gear torque knee upper and lower with new and replaced grease fittings. Removed and replaced left hand engine fuel line P/N 5013469 from heater to engine fuel pump. Removed and replaced upper cable assembly P/N 1440-3 on main cabin door. Removed and replaced combustion heater fan motor with overhauled unit P/N 24A9238 S/N A712. Removed and replaced right hand fuel vent heat tube P/N EE366R with new. Removed and replace left hand fuel vent heat tube P/N EE366L with new. Adjusted nose gear chain. Serviced all struts with nitrogen Removed and replaced left hand aux tank with overhauled unit P/N 50-389035-13 S/N CR508. Removed and replaced right hand engine ice vane door spring P/N50-190274 with new. Removed and replaced right and left hand generator paralleling rheostats P/N RES2RO with new. Removed and replaced #2 inverter with overhauled unit P/N 32E01-2A S/N RK-1924. Right and left hand propellers repaired see 8130-3. Removed and replaced bushing and hardware in rudder tab with new. Removed and replaced bushings and hardware on left and right hand elevator trim tabs with new. Removed and replaced ELT P/N ELT10 S/N94909 with serviceable unit. Removed and replaced ELT battery with new P/N BP1010 Next due change 5/01. Removed Storm scope WX1000 system from aircraft and installed doublers. C/W AD's 77-22-01, 87-22-01R1, 82-23-02, 89-25-10 All work accomplished in accordance with Beechcraft Inspection Program, all applicable FAR and 43 Apex D. I certify that this Aircraft has been inspected in accordance with an annual type inspection and all A.D. Notes checked thru bi weekly issue 99-06 for applicability and compliances see attached listing.. and I certify that this aircraft is in airworthy condition. See WO# 1935 dated 4-5-99.-----END-----

Anthony Irwin AP [REDACTED] 48 [REDACTED]

Make: Pratt & Whitney **Model:** PT6A-20 **Serial Number:** PCE-22008 **Date:** 5 April 1999

Total Time: 8756.1 **Hobbs:** 1325.4 **Total Landings:** 7440 **Registration :** N338AS

Performed Annual inspection of ~~Engine~~ in accordance with Beech Inspection Program. Progressive, and or Continuous Airworthiness inspection records were taken into considerations well as FAR 43 Appd D. Complied with Aileron Detailed Inspection Removed and re-installed overhauled primary propeller governor P/NA210578 S/N 2184033R from left hand engine after overhaul by EMI and primary propeller governors P/N A210578 S/N 2246039R from right hand engine after overhaul by EMI. Removed and re-installed over speed propeller governor P/N A210507 S/N 14761110 from left hand engine after overhaul by EMI and over speed propeller governor P/N A210507 S/N 1298750U-V after overhaul by EMI. Removed and replaced oxygen cylinder with new part number 3HT1850 S/N serial number 1A564508P. Removed and replaced L/H engine prop cable/N 55-4853-2094 with new. Removed and replaced right hand brake assembly with overhauled unit P/N 50-300010-119 S/N A3583 Removed and replaced left hand brake assembly with overhauled unit P/N 50-300010-119 S/N B4182. Removed and replaced air conditioning exhaust fan duct P/N 50-380047 with new. Removed and replaced right and left hand throttle ice protection boots P/N AD964-2 with new. Replaced bushings on left hand main gear torque knee upper and lower with new and replaced grease fittings. Removed and replaced left hand engine fuel line P/N 3013469 from heater to engine fuel pump. Removed and replaced upper cable assembly P/N 1440-3 on main cabin door. Removed and replaced combustion heater fan motor with overhauled unit P/N 24A9238 S/N A712. Removed and replaced right hand fuel vent heat tube P/N EE366R with new. Removed and replace left hand fuel vent heat tube P/N EE366L with new. Adjusted nose gear chain. Serviced all struts with nitrogen Removed and replaced left hand aux tank with overhauled unit P/N 50-389035-13 S/N CR508. Removed and replaced right hand engine ice vane door spring P/N 50-190274 with new. Removed and replaced right and left hand generator paralleling rheostats P/N RES2RO with new. Removed and replaced #2 inverter with overhauled unit P/N 32E01-2A S/N RK-1924. Right and left hand propellers repaired see 8130-3. Removed and replaced bushing and hardware in rudder tab with new. Removed and replaced bushings and hardware on left and right hand elevator trim tabs with new. Removed and replaced ELT P/N ELT10 S/N 94909 with serviceable unit. Removed and replaced ELT battery with new P/N BP1010 Next due change 5/01. Removed Storm scope WX1000 system from aircraft and installed doublers. C/W AD's 77-22-01, 87-22-01R1, 82-23-02, 89-25-10 All work accomplished in accordance with Beechcraft Inspection Program, all applicable FAR and 43 Apex D. I certify that this Engine has been inspected in accordance with an annual type inspection and all A.D. Notes checked thru bi weekly issue 99-06 for applicability and compliances see attached listing., and I certify that this aircraft is in airworthy condition. See WO# 1935 dated 4-5-99.-----END-----
Anthony Irwin AP 

Make: Pratt & Whitney **Model:** PT6A-20 **Serial Number:** PCE-20801 **Date:** 5 April 1999
Total Time: 8756.1 **Hobbs:** 1325.4 **Total Landings:** 7440 **Registration :** N338AS
Performed Annual inspection of Engine in accordance with Beech Inspection Program, Progressive, and or Continuous Airworthiness inspection records were taken into considerations well as FAR 43 Appd D. Complied with Aileron Detailed Inspection Removed and re-installed overhauled primary propeller governor P/NA210578 S/N 2184033R from left hand engine after overhaul by EMI and primary propeller governors P/N A210578 S/N 2246039R from right hand engine after overhaul by EMI. Removed and re-installed over speed propeller governor P/N A210507 S/N 14761110 from left hand engine after overhaul by EMI and over speed propeller governor P/N A210507 S/N 1298750U-V after overhaul by EMI. Removed and replaced oxygen cylinder with new part number 3HT1850 S/N serial number 1A564508P. Removed and replaced L/H engine prop cable/N 55-4853-2094 with new. Removed and replaced right hand brake assembly with overhauled unit P/N 50-300010-119 S/N A3583 Removed and replaced left hand brake assembly with overhauled unit P/N 50-300010-119 S/N B4182. Removed and replaced air conditioning exhaust fan duct P/N 50-380047 with new. Removed and replaced right and left hand throttle ice protection boots P/N AD964-2 with new. Replaced bushings on left hand main gear torque knee upper and lower with new and replaced grease fittings. Removed and replaced left hand engine fuel line P/N 3013469 from heater to engine fuel pump. Removed and replaced upper cable assembly P/N 1440-3 on main cabin door. Removed and replaced combustion heater fan motor with overhauled unit P/N 24A9238 S/N A712. Removed and replaced right hand fuel vent heat tube P/N EE366R with new. Removed and replace left hand fuel vent heat tube P/N EE366L with new. Adjusted nose gear chain. Serviced all struts with nitrogen Removed and replaced left hand aux tank with overhauled unit P/N 50-389035-13 S/N CR508. Removed and replaced right hand engine ice vane door spring P/N 50-190274 with new. Removed and replaced right and left hand generator paralleling rheostats P/N RES2RO with new. Removed and replaced #2 inverter with overhauled unit P/N 32E01-2A S/N RK-1924. Right and left hand propellers repaired see 8130-3. Removed and replaced bushing and hardware in rudder tab with new. Removed and replaced bushings and hardware on left and right hand elevator trim tabs with new. Removed and replaced ELT P/N ELT10 S/N 94909 with serviceable unit. Removed and replaced ELT battery with new P/N BP1010 Next due change 5/01. Removed Storm scope WX1000 system from aircraft and installed doublers. C/W AD's 77-22-01, 87-22-01R1, 82-23-02, 89-25-10 All work accomplished in accordance with Beechcraft Inspection Program, all applicable FAR and 43 Apex D. I certify that this Engine has been inspected in accordance with an annual type inspection and all A.D. Notes checked thru bi weekly issue 99-06 for applicability and compliances see attached listing.. and I certify that this aircraft is in airworthy condition. See WO# 1935 dated 4-5-99 -----END-----
Anthony Irwin AP [REDACTED] 48 [REDACTED]

Make:Hartzell **Model:** HC-B3TN-3B **Serial Number:** BU10988 **Date:** 5 April 1999

Total Time: 8756.1 **Hobbs:** 1325.4 **Total Landings:** 7440**Registration :**N338AS

Performed Annual inspection of Propeller in accordance with Beech Inspection Program. Progressive, and or Continuous Airworthiness inspection records were taken into considerations well as FAR 43 Appd D. Complied with Aileron Detailed Inspection Removed and re-installed overhauled primary propeller governor P/NA210578 S/N 2184033R from left hand engine after overhaul by EMI and primary propeller governors P/N A210578 S/N 2246039R from right hand engine after overhaul by EMI. Removed and re-installed over speed propeller governor P/N A210507 S/N 14761110 from left hand engine after overhaul by EMI and over speed propeller governor P/N A210507 S/N 1298750U-V after overhaul by EMI. Removed and replaced oxygen cylinder with new part number 3HT1850 S/N serial number 1A564508P. Removed and replaced L/H engine prop cable/N 55-4853-2094 with new. Removed and replaced right hand brake assembly with overhauled unit P/N 50-300010-119 S/N A3583 Removed and replaced left hand brake assembly with overhauled unit P/N 50-300010-119 S/N B4182. Removed and replaced air conditioning exhaust fan duct P/N 50-380047 with new. Removed and replaced right and left hand throttle ice protection boots P/N AD964-2 with new. Replaced bushings on left hand main gear torque knee upper and lower with new and replaced grease fittings. Removed and replaced left hand engine fuel line P/N 3013469 from heater to engine fuel pump. Removed and replaced upper cable assembly P/N 1440-3 on main cabin door. Removed and replaced combustion heater fan motor with overhauled unit P/N 24A9238 S/N A712. Removed and replaced right hand fuel vent heat tube P/N EE366R with new. Removed and replace left hand fuel vent heat tube P/N EE366L with new. Adjusted nose gear chain. Serviced all struts with nitrogen Removed and replaced left hand aux tank with overhauled unit P/N 50-389035-13 S/N CR508. Removed and replaced right hand engine ice vane door spring P/N50-190274 with new. Removed and replaced right and left hand generator paralleling rheostats P/N RES2RO with new. Removed and replaced #2 inverter with overhauled unit P/N 32E01-2A S/N RK-1924. Right and left hand propellers repaired see 8130-3. Removed and replaced bushing and hardware in rudder tab with new. Removed and replaced bushings and hardware on left and right hand elevator trim tabs with new. Removed and replaced ELT P/N ELT10 S/N94909 with serviceable unit. Removed and replaced ELT battery with new P/N BP1010 Next due change 5/01. Removed Storm scope WX1000 system from aircraft and installed doublers. C/W AD's 77-22-01. 87-22-01R1. 82-23-02. 89-25-10 All work accomplished in accordance with Beechcraft Inspection Program, all applicable FAR and 43 Apex D. I certify that this Propeller has been inspected in accordance with an annual type inspection and all A.D. Notes checked thru bi weekly issue 99-06 for applicability and compliances see attached listing.. and I certify that this aircraft is in airworthy condition. See WO# 1935 dated 4-5-99.-----END-----

Anthony Irwin AB [REDACTED]

Make:Hartzell **Model:** HC-B3TN-3B **Serial Number:** BUA19506 **Date:** 5 April 1999

Total Time: 8756.1 **Hobbs:** 1325.4 **Total Landings:** 7440**Registration :**N338AS

Performed Annual inspection of Propeller in accordance with Beech Inspection Program, Progressive, and or Continuous Airworthiness inspection records were taken into considerations well as FAR 43 Appd D. Complied with Aileron Detailed Inspection Removed and re-installed overhauled primary propeller governor P/NA210578 S/N 2184033R from left hand engine after overhaul by EMI and primary propeller governors P/N A210578 S/N 2246039R from right hand engine after overhaul by EMI. Removed and re-installed over speed propeller governor P/N A210507 S/N 14761110 from left hand engine after overhaul by EMI and over speed propeller governor P/N A210507 S/N 1298750U-V after overhaul by EMI. Removed and replaced oxygen cylinder with new part number 3HT1850 S/N serial number 1A564508P. Removed and replaced L/H engine prop cable/N 55-4853-2094 with new. Removed and replaced right hand brake assembly with overhauled unit P/N 50-300010-119 S/N A3583 Removed and replaced left hand brake assembly with overhauled unit P/N 50-300010-119 S/N B4182. Removed and replaced air conditioning exhaust fan duct P/N 50-380047 with new. Removed and replaced right and left hand throttle ice protection boots P/N AD964-2 with new. Replaced bushings on left hand main gear torque knee upper and lower with new and replaced grease fittings. Removed and replaced left hand engine fuel line P/N 3013469 from heater to engine fuel pump. Removed and replaced upper cable assembly P/N 1440-3 on main cabin door. Removed and replaced combustion heater fan motor with overhauled unit P/N 24A9238 S/N A712. Removed and replaced right hand fuel vent heat tube P/N EE366R with new. Removed and replace left hand fuel vent heat tube P/N EE366L with new. Adjusted nose gear chain. Serviced all struts with nitrogen Removed and replaced left hand aux tank with overhauled unit P/N 50-389035-13 S/N CR508. Removed and replaced right hand engine ice vane door spring P/N50-190274 with new. Removed and replaced right and left hand generator paralleling rheostats P/N RES2RO with new. Removed and replaced #2 inverter with overhauled unit P/N 32E01-2A S/N RK-1924. Right and left hand propellers repaired see 8130-3. Removed and replaced bushing and hardware in rudder tab with new. Removed and replaced bushings and hardware on left and right hand elevator trim tabs with new. Removed and replaced ELT P/N ELT10 S/N94909 with serviceable unit. Removed and replaced ELT battery with new P/N BP1010 Next due change 5/01. Removed Storm scope WX1000 system from aircraft and installed doublers. C/W AD's 77-22-01, 87-22-01R1, 82-23-02, 89-25-10 All work accomplished in accordance with Beechcraft Inspection Program, all applicable FAR and 43 Apex D. I certify that this Propeller has been inspected in accordance with an annual type inspection and all A.D. Notes checked thru bi weekly issue 99-06 for applicability and compliances see attached listing.. and I certify that this aircraft is in airworthy condition. See WO# 1935 dated 4-5-99.-----END-----
Anthony Irwin AP [REDACTED]

Reg. Number: N338AS Aircraft Mfg.: BEECH Yr. Mfg.: 4a 1970
 Model: 390 Serial Number: LJ493
 ACTT: 8756.1 Landings 7440 Date of Annual /100 hr. Type Insp.: 3/99
 Performed By: ANTHONY IRWIN Cert.: [REDACTED]
 Latest A.D. Bi-Weekly Rev. #: 99-06 Airframe T.C. #: 3A20
 Static Sys Date: SEPT 1998 ELT Date: MAY 2001
 Any STCs Installed: YES - STC# SA615.EA / SA 2569.WE.

ENGINES: Mfg.: PRATT & WHITNEY
 Eng. T.C. Data Sheet #: E4EA

LEFT:	RIGHT:
Model: <u>PT6A-20</u>	Model: <u>PT6A-20</u>
S/N: <u>PCE-20801</u>	S/N: <u>PCE-22008</u>
Total Time: <u>24,873.8</u>	Total Time: <u>32,446.7</u>
T.S.M.O.H.: <u>2925.8</u>	T.S.M.O.H.: <u>3113.7</u>
T.S.H.S.I. (if appl.): <u>23.35 Hrs.</u>	T.S.H.S.I. (if appl.): <u>23.35 Hrs.</u>

PROPELLERS (if appl.): Mfg. HARTZELL
 R Prop. T.C. Data Sheet #: P15EA L
 Model: HC-B3TN-3B Model: HC-B3TN-3B
 Blade Dwg.: T10173B-8R Blade Dwg.: T10173B-8R
 S/N: BU10988 S/N: -BUA 19506
 Total Time: Est 27,720 Total Time: 10,093.35
 T.S.M.O.H.: 394.3 T.S.M.O.H.: 394.3

Verified

✓ 1. Proof of Previous Aircraft holding U.S. Certificate of Airworthiness (via Copy of previous U.S. Certificate of Airworthiness, Copy of Airframe Logbook entry for issuance of U.S. Certificate of Airworthiness, Copy of Previous U.S. Export Certificate of Airworthiness, or Copy of Airframe Logbook entry for issuance of U.S. Export Certificate of Airworthiness.

✓ 2. Current and Valid U.S. Registration (FAA form # 8050-3).

3. Current Export Certificate of Airworthiness from Country of Export ?

4. Original - "Purchaser's Copy" of Bill of Sale (FAA form # 8050-2), if recently sold.

a. If recently purchased, verbal confirmation by FAA Registry, AVN-450, Ok. City, OK.

If called: Agent: _____ Date: _____

b. Original - "Pink Copy" of Registration Application (FAA form #8050-1) if recently changed.

5. Current and up to date - "Weight and Balance Report"
For that specific aircraft.

✓ 6. Current - "Flight Manual or Pilot's Operating Handbook" - approved for that particular aircraft by Serial Number.

✓ 7. Current and up to date - "Equipment List" for that particular aircraft.

✓ 8. Major Repair & Alteration forms (FAA form # 337) for any major repairs or alterations performed on that specific aircraft.

✓ 9. Annual/100 hr. Type Inspections - on airframe, engines and propellers - Must be within thirty (30) days of the Date of Application for Recurrent Certificate of Airworthiness. See FAR 43, Appendix D for description of inspection.

✓ 10. Any applicable Airworthiness Directives - Must be complied with and recorded in the applicable engine, propeller, or airframe maintenance records. Inclusive of all components, appliances - ANY.

✓ 11. All (Airframe, Engines, & Propellers) - LD. and Data Plates, verified for Model Numbers, Part Numbers, and Serial Numbers.

✓ 12. All required "PLACARDS" - as required by the Limitations Section of the Aircraft Flight Manual, the Pilot's Operating Handbook, and/or the Aircraft Type Certificate Data Sheet - Must be in place on aircraft.

13. Any Modifications performed while under foreign registration? NO

(note: List if performed in accordance with any U.S. STCs.)

Name and Address of Current Registered Owner (or forward copy of current U.S. Registration):

Name: _____ Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ FAX: _____

NOTE:

If acting in behalf of or as authorized representative for U.S. Registered Owner. A notarized letter must be provided as proof of authority to act in the behalf of U.S. Registered Owner.

Location at which aircraft will have Recurrent Certification Inspection:

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL	3. AIRCRAFT SERIAL NUMBER	4. CATEGORY
N388AS	BEECHCRAFT B90	LJ 493	NORMAL

5. AUTHORITY AND BASIS FOR ISSUANCE

This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

Exceptions:

NONE

6. TERMS AND CONDITIONS

Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, and the aircraft is registered in the United States.

DATE OF ISSUANCE	SIGNATURE	DESIGNATION NUMBER
JUNE 18, 1993	FRED C. WILLIAMS	DAR-80FS-SO

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

13

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I FIND THAT THE AIRCRAFT MEETS THE REQUIREMENTS FOR THE CERTIFICATION REQUESTED AND HAVE ISSUED A (STANDARD) (SPECIAL) AIRWORTHINESS CERTIFICATE DATED 6-18-93
FRED C. WILLIAMS DAR 80-FS-50

DIRECCION NACIONAL DE AERONAVEGABILIDAD

Duplicado.....[] Rec. No. 1
 Triplicado.....[]
 Cuadruplicado.....[]

Formulario unico aplicativo para reparaciones, inspecciones y modificaciones de aeronave - motor - helice instrumental, equipos de radio y accesorios.

INSTRUCCIONES: Para el llenado de esta planilla ver instrucciones en el Boletín Informativo No. 50

1.- AERONAVE	Marca: BEECHCRAFT	Modelo: B - 90	Categoría: NORMAL
	Serie No.: LJ-493	Matricula: LU-WMD	
2.- PROPIETARIO	Nombre: BRAVO-FOXTRO S.R.L.	Dirección: BOLIVIA 1623 CAPITAL FEDERAL	

3.- TIPO DE AERONAVE ☒ - AVION ☐ - HELICOPTERO ☐ - OTROS

4.- DOCUMENTACION DE LA AERONAVE

Certif. de Aeronav. (Vence día ABRIL/1996)	Observaciones: CERTIFIC. AERONAV. STD.	S/Nº
Certif. de Matr. y Propiedad 05/05/95 y 05/05/95	Esta a nombre de su actual propietario	SI XX
Manual de Vuelo Registrado: A-0205 DMA	Esta actualizado	SI XX
Registro de Peso y Balanceo: SEGUN MANUAL 20/07/93	" "	SI XX
Historial del Avion. Nº 1 (uno)	" "	SI XX
Historial de/los motores. Nº 1 (uno)	" "	SI XX
Observaciones: Nº 1 (uno)	" "	SI XX

5.- PAGO DE TASA Recibo Nº **443908** Año **1996** EXIMIDO ☒ NO

TRABAJOS EFECTUADOS PREVIO A LA INSPECCION

6.- (Identificación de la Unidad)

UNIDAD	MARCA	MODELO	SERIE NO.	REPARAC.		Rec. Gen.	INSPECCION/por		
				May.	Men.		Reh.	Mod.	Tido
AVION	BEECHCRAFT	B-90	LJ-493				XX		
MOTORES	1 PRATT & WHITNEY	PT6A-20	PCE 20801				XX		
	2 PRATT & WHITNEY	PT6A-20	PCE 20801						
	3								
	4								
HELICE	1 HARTZELL	HC-B3TN-3B	BU-187				XX		
	PALAS	T10173B-8R	C84980/C84302/D1754						
	2 HARTZELL	HC-B3TN-3B	BU-10988						
	PALAS	T10173B-8R	H13118/H12170/H12314						
INST. RADIO ACCES.	ALTIMETRO COD. TRANSPONDER	IDC 28702-552 WILCOX 0977680101 WILCOX 0977680101	TYPE 519 S/N 382 1310 711				XX		

Nombre y Dirección AERO MECANICA AEROPUERTO DON TORCUATO TALLERES AERONAUTICOS C.C. 33 - 1611 - D. TORCUATO TEL. 748-0652	7.- TALLER	Representante Técnico ANTONIO M. KILIAN INGENIERO AERONAUTICO MECANICO MANTENIMIENTO CAT. C Nº 24 Sello
	Tipo Taller: MANTENIMIENTO Y REPARACION	
	Categoría: AERONAVES: I y III; MOTORES: I (LIMITADAS)	
	Nº. de Habilitación: 1-B-165	

LUGAR Y FECHA: Don Torcuato Día 25 Mes ABRIL Año: 1996 ; VENCIMIENTO: 30-ABRIL-1997

ORM.8130-6: ABONADO R.O.No. 32056 ; EXPTE. DMA 66158 - 22/04/96

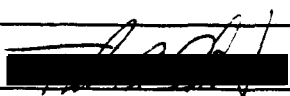
AIRCRAFT MODEL:	Beech B-90	SERIAL:	LJ-493	REGISTRATION:	N388AS
REGISTERED OWNER:	Joda Partnership			DATE WEIGHED:	3-22-99
ADDRESS:	14323 S. Outer Forty Dr. Ste 120			PLACE:	FXE
	Town & Country, Mo. 63017			TACH:	HM: 1325.5

WEIGHING POINT	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN JACK	2118.0	0	2118.0	195.5	414,069.0
RIGHT MAIN JACK	3287.0	0	3287.0	195.5	642,608.5
NOSE/TALE JACK	3423.0	0	3423.0	83.5	285,820.5
TOTAL AS WEIGHED	8828.0	0	8828.0	152.07	1,342,498.0
LESS USABLE FUEL (384.0 GAL)			-2573.0		-400,100.0
LESS USABLE FUEL (GAL)					
NEW AIRCRAFT BASIC TOTALS			6255.0	150.66	942,398.0

NOTES

AIRCRAFT WEIGHED IN LEVEL FLIGHT ATTITUDE INSIDE HANGAR.

Weighed full fuel & oil, with 8 seats installed.

SCALES MODEL EW-3-0101-312C, SERIAL 1196, CALIBRATED ON: JUNE 29, 1998					
NEW AIRCRAFT BASIC WEIGHT	6255.0	LB.	NEW BASIC C.G.	150.66	IN.
AIRCRAFT GROSS WEIGHT	9650.0	LB.	NEW USEFUL LOAD	3395.0	LB.
WEIGHED BY			AIRFRAME LICENSE NO.	324647477	

AIRCRAFT WEIGHING CORPORATION
2500 N.W. 62ND STREET HANGAR B
FT. LAUDERDALE, FL. 33309
954-928-1619
FAX 938-5173


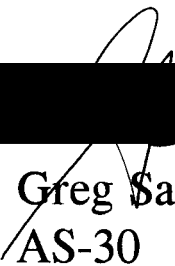
APPENDIX B

WEATHER DATA

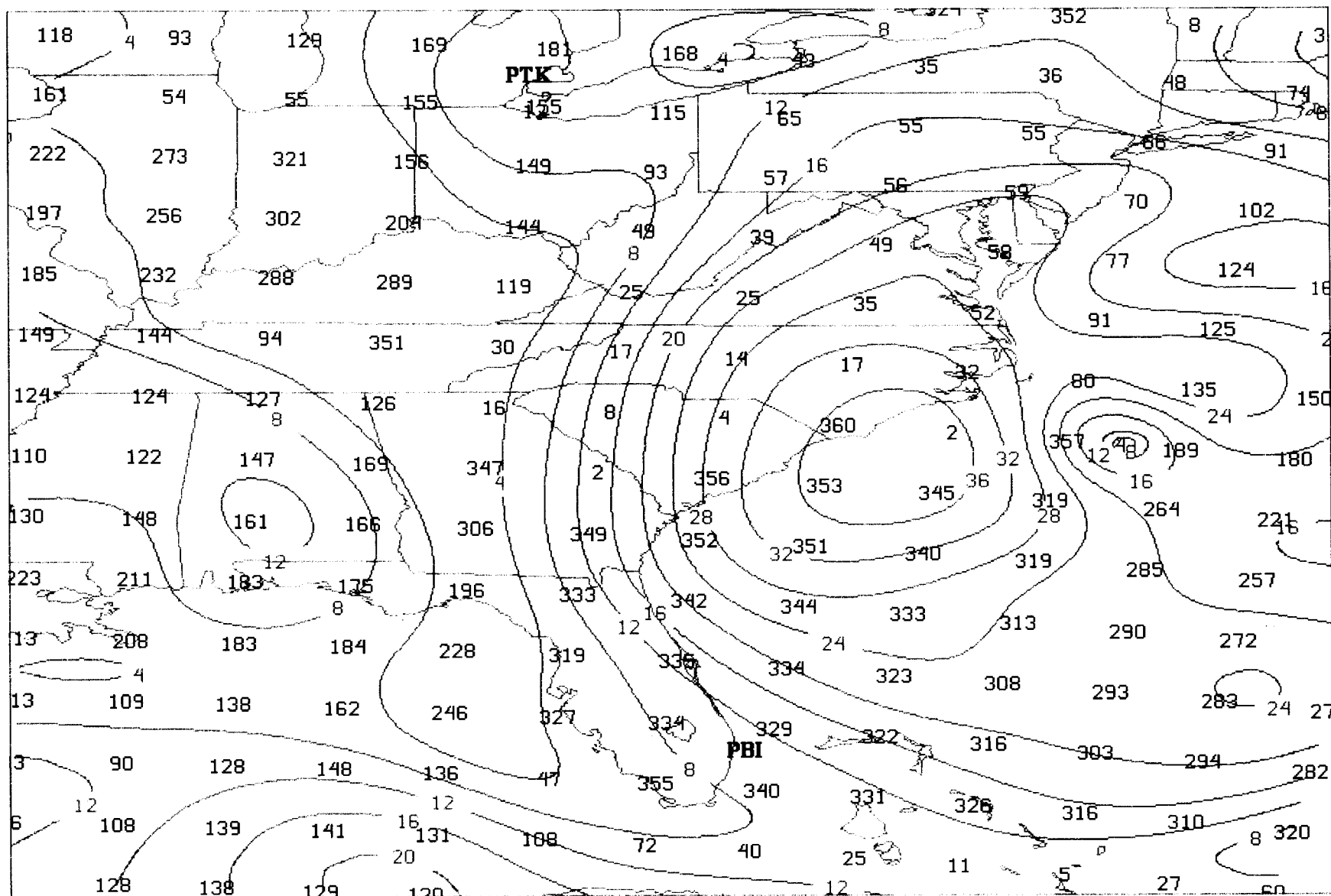
NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington D.C.

Data from McIDAS

Attachments 1 and 2 ... Contours of wind speed (knots) and plot of wind direction (degrees true) based on the ETA Numerical Forecast Model for September 3, 1999 at 0000Z valid September 3, 1999 at 0600Z; contour and plot levels 600 millibars (about 13,800 feet) and 550 millibars (about 16,000 feet).

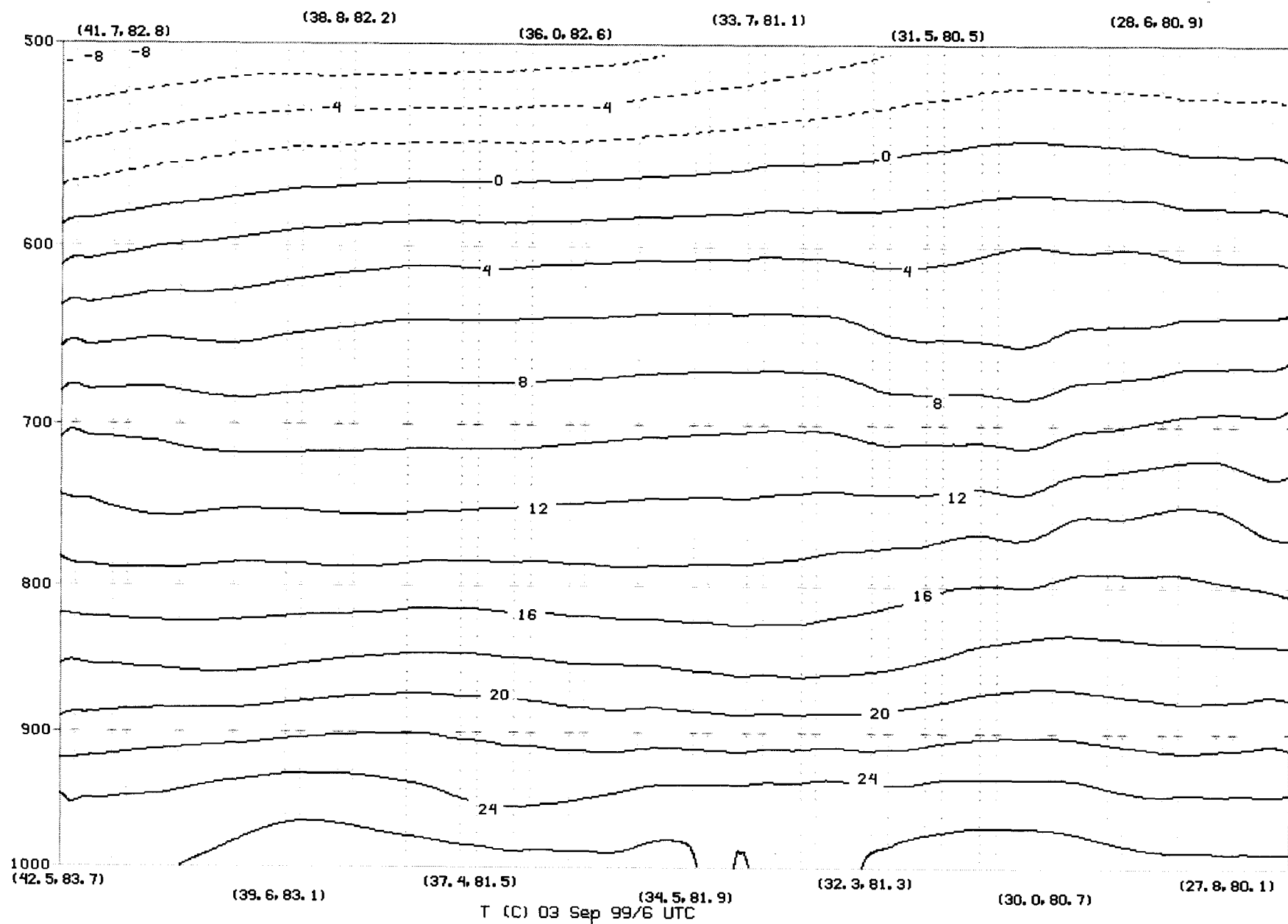


Greg Salottolo
AS-30
9-8-99



SPD (KT) 600 MB TIME 0Z DAY 1999246Z VALID 1999246Z/06Z
 DIR (DEG) 600 MB TIME 0Z DAY 1999246Z VALID 1999246Z/06Z

SALOTTOLO AS-30



SEP 04 SEP 04 '99 01:59PM FAA HQ WASHDC ADA40 ADA40 294 7310 TO 012-000
Sep-04-99 10:26A Lansing AT-33

P.2. Review

04: 15:28

PD

TIME ACKNOWLEDGED: 030204

ORIGINATOR: KLANYFYX 015 .

AI:LN33BAS FR:I AT:BE90/I TS:200 DD:PTK TM:P030210 AE:150 RT:PTK..2622/B006..BCT

AD:BCT TE:0500 RM:*LIFEGUARD L/L BCT OP:ZCC TA:030710 FB:0600 AA:PBI

PD:RIVERA BCT NB:7 CR:W/R/GLD JJ

END OF DISPLAY

99 SEP -4 AM 10:41

INIT:

AB1505
FussRL

517 321 0803 PAGE.001

** TOTAL PAGE.001 **

03/
D0332Z

SEP 04 '99 10:42

CC: AAI
NTSB
AAT
AAS

56

NTSB
HAZARD JUNE 17 2000

FAA NTSB VETERMAN/MIA

APPENDIX C

MAINTENANCE RECORDS



1575 West Commercial Blvd.
Fort Lauderdale Executive Airport
Florida 33309
(954) 491-3170 • FAX (954) 771-0281

WORK ORDER INVOICE

WORK ORDER: 50/15270

MAINTENANCE SERVICES

FAA Certified Repair Station WD4R618M

PAGE NUMBER	1
DOCUMENT NUMBER	356184
DATE	7/30/99

AIRCRAFT BATTERY DEAD

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder : .00
F.R. Changed : .00 LYNN
A/C Total Time : .00
Flight Ckd By : Not Required

itation No

338

Due Out

dep

—

For

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	Flight Ckd By : Not Required CUSTOMER REPRESENTATIVE					
COD			DELIVERED	15270	7/06/99	7/06/99		Hassan A. Ghaffari			Lesley F. Bowser		
LN NO	ITEM NUMBER	ITEM DESCRIPTION		ITEM REFERENCE	B O	T A X	QUANTITY PLR	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
01		MAINTENANCE DEPARTMENT											
		AIRCRAFT BATTERY DEAD											
		REMOVED BATTERY FROM AIRCRAFT SENT TO OUTSIDE VENDOR FOR DEEP CYCLE. ATTEMPTED TO INSTALL LOANER BATTERY PROVIDED BY VENDOR BUT TEMP SENSOR CANNON PLUG WAS BROKEN. NOTIFIED CUSTOMER.											
		Labor Totals											62.00
		Outside Service Section: EVAL FEE ON BATT SN A9611 Outside Service Totals Operation 0001 Totals:		50510350-379						150.00	NET	150.00	150.00 150.00 212.00
997		MAINTENANCE DEPARTMENT											
		PARTS RESEARCH											
		COMPLIED WITH PARTS RESEARCH. Operation 0997 Totals:											.00
999		MAINTENANCE DEPARTMENT											
		IT HAS BEEN OUR PLEASURE SERVING YOU AND WE WOULD LIKE TO TAKE A MOMENT TO THANK YOU FOR YOUR BUSINESS.											
		SIGNATURE: [REDACTED] DATE: 8-3-99											
		BANYAN AIR SERVICE Operation 0999 Totals:											.00
									Subtotal:				212.00

Continued on Next Page.

The Aviation Professionals

The Aviation Professionals

ITEM <u>1</u>	Written By: <u>H.</u>	Discrepancy <u>A/C BATTERY is Dead</u>
Customer Auth.		

Corrective Action:

Removed Battery from aircraft Sent to outside vendor for Deep Cycle. Attempted to install LOAvel Battery provided by vendor but temp sensor canon plug was broken. Notified Customer, (at)

Notes:

Part No. Removed	Part No. Installed	Customer Supplied	Outside Service by:
Serial No. Removed	Serial No. Installed	Functional Test	Type of Service:
O.K. to Close	Date:	TECH:	INSP:

PARTS LIST

QTY.	PART NUMBER	DESCRIPTION	SERIAL OFF	SERIAL ON

Billing Information:	Job Code:	Estimate Hours:	Actual Hours:	Time & Material:	Warranty
----------------------	-----------	-----------------	---------------	------------------	----------



1575 West Commercial Blvd.
Fort Lauderdale Executive Airport
Florida 33309
(954) 491-3170 • FAX (954) 771-0281

WORK ORDER INVOICE

WORK ORDER: 80/30763

TURBINE SERVICES

FAA Certified Repair Station WD4R618M

PAGE NUMBER	1
DOCUMENT NUMBER	351229
DATE	6/29/99

TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe	
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
01		TURBINE SERVICES PERFORM TORQUE AND T-5 CALIBRATION PERFORMED TORQUE VERIFICATION, NO ADJUSTMENT REQUIRED. PERFORMED T-5 VERIFICATION, BOTH INDICATORS REQUIRED ADJUSTMENT. ADJUSTED ITT INDICATORS IN ACCORDANCE WITH BEECH 90 MAINTENANCE MANUAL. Labor Totals Operation 0001 Totals:										500.00 500.00
02		TURBINE SERVICES SPLIT BOTH ENGINES AND REMOVE CT DISKS FOR EVALUATION AND REINSTALL AFTER REPAIR. SPLIT LEFT AND RIGHT ENGINE AT C-FLANGE AND REMOVED LEFT AND RIGHT CT DISKS FOR EVALUATION. Labor Totals Parts Section: M83248-1-019 O-RING (SAME AS MS9388-019) 3012724 RETAINER Parts Totals Operation 0002 Totals:										1500.00 8.00 .78 NET .78 6.24 4.00 2.18 NET 2.18 8.72 14.96 1514.96
03		TURBINE SERVICES REMOVE HSI COMPONENTS FROM LEFT HAND ENGINE FOR REPAIR AND REINSTALL HSI COMPONENTS AFTER REPAIR REMOVED LEFT HAND ENGINE HSI COMPONENTS FOR EVALUATION AND REPAIR AND										

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The Aviation Professionals

THE AVIATION **AIR SERVICE**

Fort Lauderdale Executive Airport
 Florida 33309
 (954) 491-3170 • FAX (954) 771-0281

WORK ORDER INVOICE

WORK ORDER: 80/30763

TURBINE SERVICES

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
 14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
 14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
 Unit : N338AS
 Make : KING AIR
 Model : B90
 Serial Number : LJ493
 Flight Recorder: 1,325.50
 F.R. Changed : .00 LYNN
 A/C Total Time : 1,325.50
 Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE					
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe		
LN NO.	ITEM NUMBER	ITEM DESCRIPTION		ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
		REINSTALLED AFTER REPAIR. Labor Totals Operation 0003 Totals:											2000.00 2000.00
04		TURBINE SERVICES											
		REMOVE HSI COMPONENTS FROM RIGHT HAND ENGINE FOR REPAIR AND REINSTALL HSI COMPONENTS AFTER REPAIR											
		REMOVED RIGHT HAND ENGINE HSI COMPONENTS FOR REPAIR AND REINSTALLED AFTER REPAIR. Labor Totals Operation 0004 Totals:											2000.00 2000.00
05		TURBINE SERVICES											
		DISASSEMBLE, REWORK, REASSEMBLE AND MACHINE LEFT HAND INNER EXIT DUCT ASSEMBLY											
		DISASSEMBLED, REWORKED, REASSEMBLED USING 4 OVERHAULED CT GUIDE VANES AND SEGMENTS MACHINED TO 10 OF 8.574. Labor Totals											.00
		Parts Section:											
	8118962-01	GASKET					Each		1.00	16.72	NET	16.72	16.72
	T019551	X	CT VANE (PMA)	402			Each		4.00	357.14	NET	357.14	1428.56
	T020485		SEGMENTS PMA	80015020-379			Each		13.00	142.85	3.9%	137.30	1784.90
	T020484		SEGMENTS PMA	80015020-379			Each		1.00	185.71	16.0%	156.00	156.00

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TURBINE SERVICES

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B 5466
I JODA FINANCIAL GROUP
L DAVID STONE
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S 5466
H JODA FINANCIAL GROUP
I DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe	
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B.O.	TAX	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
		Parts Totals	80015020-379									3386.18
		Operation 0005 Totals:										3386.18
06		TURBINE SERVICES										
	DISASSEMBLE, ASSEMBLY	REWORK, REASSEMBLE AND MACHINE RIGHT HAND INNER EXIT DUCT										
	DISASSEMBLED,	RETORKED, REASSEMBLED USING 4 OVERHAULED CT GUIDE VANES.										.00
		Labor Totals										.00
		Parts Section:										
T019551	X	CT VANE (PMA)	80015020-379			Each		4.00	357.14	NET	357.14	1428.56
T020484		SEGMENTS PMA	80015020-379			Each		1.00	185.71	16.0%	156.00	156.00
T020485		SEGMENTS PMA	80015020-379			Each		13.00	142.85	3.9%	137.30	1784.90
		Parts Totals										3369.46
		Operation 0006 Totals:										3369.46
07		TURBINE SERVICES										
	DEBLADE, REBLADE, TRUE AND BALANCE LEFT HAND CT DISK											
	BLADED NEW DISK TRUED AND BALANCED TO 8.550 (SEE 8130) USING 58 NEW BLADES.											.00
		Labor Totals										.00
		Parts Section:										

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The Aviation Professionals

AIR SERVICEFlorida 33309
(954) 491-3170 • FAX (954) 771-0281**TURBINE SERVICES**

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

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H 5466
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P DAVID STONE
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Registration : N338AS
 Unit : N338AS
 Make : KING AIR
 Model : B90
 Serial Number : LJ493
 Flight Recorder: 1,325.50
 F.R. Changed : .00 LYNN
 A/C Total Time : 1,325.50
 Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe	
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
	T023401	CT BLADES (PMA)	80015020-379			Each		58.00	212.85	6.0%	200.00	11600.00
	3013511	C.T. DISC	50508290-379			Each		1.00	25500.00	26.7%	18700.00	18700.00
		S/N: 40B463										
	AN123158	RIVETS				Each		4.00	.38	NET	.38	1.52
	AN125403	RIVETS				Each		6.00	.20	NET	.20	1.20
	3010117CL3	BALANCE WEIGHT				Each		1.00	40.11	NET	40.11	40.11
	3010117CL2	BALANCE WEIGHT				Each		1.00	40.11	NET	40.11	40.11
	3010117CL5	BALANCE WEIGHT				Each		1.00	43.27	NET	43.27	43.27
	3018240	RIVET				Each		58.00	3.63	NET	3.63	210.54
		Parts Totals										30636.75
		Operation 0007 Totals:										30636.75
08 TURBINE SERVICES												
	DEBLADE, REBLADE, TRUE AND BALANCE RIGHT HAND CT DISK											
	1 BLADED, DISK (CUSTOMER FURNISHED) USING 58 NEW BLADES. TRUED AND BALANCED TO 8.550 (SEE 8130).											
		Labor Totals										.00
		Parts Section:										
	T023401	CT BLADES (PMA)	800150250-379			Each		58.00	212.85	6.0%	200.00	11600.00
	AN123158	RIVETS				Each		5.00	.38	NET	.38	1.90
	AN125403	RIVETS				Each		4.00	.20	NET	.20	.80
	3010117CL5	BALANCE WEIGHT				Each		2.00	43.27	NET	43.27	86.54
	3010117CL2	BALANCE WEIGHT				Each		1.00	40.11	NET	40.11	40.11
		Parts Totals										11729.35

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TURBINE SERVICES

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B 5466
I JODA FINANCIAL GROUP
L DAVID STONE
L 14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

S 5466
H JODA FINANCIAL GROUP
I DAVID STONE
P 14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder : 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE						
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe		Jeffrey B. Grothe				
LN NO	ITEM NUMBER	ITEM DESCRIPTION			ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
		Operation 0008 Totals:												11729.35
09		TURBINE SERVICES												
		REPAIR LEFT HAND POWER SECTION T-5 SYSTEM												
		TESTED T5 SYSTEM FOUND LEFT HAND HARNESS AND BUSBAR WEAK AND SHORTED. ALL PROBES ARE SAFETIED AND SPACED INCORRECTLY. INSTALLED HARNESS P/N 3040110 S/N NR12813 AND BUSBAR P/N 3024120 S/N 8F104 AND SAFETIED AS REQUIRED.												
		Labor Totals												.00
		Parts Section:												
	3117924-01	T5 HARNESS			80015020-379			Each		1.00	1428.57	12.5%	1250.00	1250.00
	3022983	X	THERMOCOUPLE		80015020-379			Each		1.00	235.71	NET	235.71	235.71
	3007422		PACKING		80015020-379			Each		1.00	280.00	NET	280.00	280.00
	3027628	X	TS. BUSBAR		80015020-379			Each		1.00	1685.71	NET	1685.71	1685.71
		S/N: 4870												
		Parts Totals												3451.42
		Freight Section:												
		S/H VANES/BLADES/BUSBAR/HARNES			80015020-379									69.07
		Freight Totals												69.07
		Operation 0009 Totals:												3520.49
10		TURBINE SERVICES												

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The Aviation Professionals

AIR SERVICEFlorida 33309
(954) 491-3170 • FAX (954) 771-0281**TURBINE SERVICES**

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
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S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe		Jeffrey B. Grothe		
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
	REPAIR RIGHT	HAND POWER SECTION T-5 SYSTEM										
		TESTED RIGHT HAND T5 SYSTEM. FOUND HARNESS SHORTED AND ONE THERMOCOUPLE PROBE DOES NOT RESPOND. BUSBAR BROKEN. ALL PROBES ARE SAFETIED AND SPACED INCORRECTLY. INSTALLED BUSBAR P/N 3024120 S/N 4870 AND HARNESS P/N 3040110 S/N NR12814.										
		Labor Totals										.00
3024120	X	Parts Section: BUSBAR	80015080-379			Each		1.00	1685.71	NET	1685.71	1685.71
3117924-01		S/N: 8F104 T5 HARNESS	80015020-379			Each		1.00	1428.57	12.5%	1250.00	1250.00
3007422		PACKING	80015020-379			Each		1.00	280.00	NET	280.00	280.00
		Parts Totals										3215.71
		Freight Section: SHIP/HANDLE ON BUSBAR	80015080-379									33.44
		Freight Totals										33.44
		Operation 0010 Totals:										3249.15
11	TURBINE SERVICES											
	SEND RIGHT HAND COMBUSTION LINER OUT FOR REPAIR											
	SENT RIGHT HAND COMBUSTION LINER P/N 3023774 S/N 2241 TO TURBINE WELD FOR REPAIR.											
		Labor Totals										.00

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The Aviation Professionals

TURBINE SERVICES

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
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H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
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Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe		Jeffrey B. Grothe		
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
	3023771	Parts Section: COOLING RING	80015000-379			Each		1.00	1121.42	NET	1121.42	1121.42
		Parts Totals										1121.42
		Outside Service Section: REPAIR COMBUSTION LINER SN2241	80015000-379						1560.00	NET	1560.00	1560.00
		Outside Service Totals										1560.00
		Freight Section: S/H LINER (IN/OUT)/COOL RING	80015000-379									83.75
		Freight Totals										83.75
		Operation 0011 Totals:										2765.17
12		TURBINE SERVICES										
		SEND LEFT HAND SHROUD HOUSING OUT FOR REPAIR										
		SENT LEFT HAND SHROUD HOUSING P/N 3020259 S/N UNKNOWN TO TURBINE WELD FOR REPAIR. RECEIVED SAME P/N AND S/N AFTER REPAIR.										
		Labor Totals										.00
		Outside Service Section: REPAIR CT SHROUD HOUSING	80015000-379						857.15	NET	857.15	857.15
		RE-CHECK CT SHROUD HOUSING	80015070-379						.00	NET	.00	.00
		Outside Service Totals										857.15
		Freight Section: SHIP/HANDLE HOUSING (IN/OUT)	80015000-379									74.07

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The Aviation Professionals

BAVIAN AIR SERVICE

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TURBINE SERVICES

FAA Certified Repair Station WD4R618M

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

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Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE					
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe		
LN NO	ITEM NUMBER	ITEM DESCRIPTION		ITEM REFERENCE	B.O.	TAX	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
		Freight Totals											74.07
		Operation 0012 Totals:											931.22
13		TURBINE SERVICES											
		CLEAN, FLOW AND PRESSURE CHECK LEFT HAND FUEL NOZZLES											
		PRE-FLOWED 14 TIPS. FOUND 8 STREAKING. DISASSEMBLED, CLEANED, REASSEMBLED. FUNCTIONAL CHECKED FOUND 8 TIPS STILL STREAKING. REPLACED 8 TIPS. PRESSURE AND FUNCTIONALLY CHECKED IN ACCORDANCE WITH PRATT AND WHITNEY MAINTENANCE MANUAL P/N 3015442. NOZZLE P/N 27700-1. REPLACED SHEATH P/N 3024126.											
		Labor Totals					Hour		10.00	58.00	NET	58.00	580.00
		Parts Section:											
27700-1	C	NOZZLE TIP		80015040-396			Each	8.00	.00	NET	.00	.00	.00
27700-1	X	FUEL NOZZLE TIP - EXCHANGE		80015040-379			Each	8.00	65.57	NET		65.57	524.56
AS3209-010		O-RING		402			Each	14.00	.29	NET		.29	4.06
3029678		NOZZLE GASKET		80015030-379			Each	14.00	12.02	NET		12.02	168.28
3024126	X	SHEATH		80015030-379			Each	1.00	131.42	NET		131.42	131.42
		S/N: N/S/N											
		Parts Totals											828.32
		Freight Section:											
		SHIP/HANDLE NOZZLE TIPS IN/OUT 80015040-379											23.50
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The Aviation Professionals



1575 West Commercial Blvd.
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TURBINE SERVICES

FAA Certified Repair Station WD4R618M

PAGE NUMBER	9
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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

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Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE					
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe		Jeffrey B. Grothe			
IN NO	ITEM NUMBER	ITEM DESCRIPTION		ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
		Freight Totals											23.50
		Operation 0013 Totals:											1431.82
14		TURBINE SERVICES											
		CLEAN, FLOW AND PRESSURE CHECK RIGHT HAND FUEL NOZZLES											
		PREFLOWED 14 NOZZLES. FOUND 7 TIPS STREAKING. DISASSEMBLED, CLEANED AND REASSEMBLED AND FUNCTIONALLY CHECKED. FOUND 7 TIPS STREAKING. REPLACED 7 TIPS P/N 27700-1. PRESSURE AND FUNCTIONALLY CHECKED IN ACCORDANCE WITH PRATT AND WHITNEY MAINTENANCE MANUAL P/N 3015442.											
		Labor Totals					Hour		10.00	58.00	NET	58.00	580.00
		Parts Section:											
27700-1	C	NOZZLE TIP		80015040-396			Each		7.00	.00	NET	.00	.00
27700-1	X	FUEL NOZZLE TIP - EXCHANGE		80015040-379			Each		7.00	65.57	NET	65.57	458.99
M83248-1-904		O-RING (SAME AS MS9387-04)		402			Each		2.00	.39	NET	.39	.78
AS3209-010		O-RING		402			Each		7.00	.29	NET	.29	2.03
3029678		NOZZLE GASKET		80015030-379			Each		14.00	12.02	NET	12.02	168.28
		Parts Totals											630.08
		Freight Section:											
		SHIP/HANDLE ON SHEATH/GASKETS		80015030-379									30.00
		Freight Totals											30.00
		Operation 0014 Totals:											1240.08

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TURBINE SERVICES

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TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

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Registration : N338AS
Unit : N338AS
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A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe	
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B.O.	TAX	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
15		TURBINE SERVICES REINSTALL POWER SECTIONS AFTER REPAIR SEE ITEM #2.										
		Labor Totals										.00
	T024979	Parts Section: SEAL RING PMA	80015020-379			Each		2.00	1114.28	NET	1114.28	2228.56
		Parts Totals										2228.56
		Operation 0015 Totals:										2228.56
16		TURBINE SERVICES SPLIT BOTH ENGINES AFTER RUN IN.										
		RESPLIT LEFT HAND AND RIGHT HAND ENGINES AFTER BREAK-IN RUNS FOR EVALUATION. REMOVED CT DISKS. REBALANCED LEFT HAND CT DISK. REINSTALLED DISK AND BOTH POWER SECTIONS.										
		Labor Totals										1500.00
	2380	Parts Section: OIL, EXXON				Quart		4.00	9.40	NET	9.40	37.60
		Parts Totals										37.60
		Operation 0016 Totals:										1537.60
17		TURBINE SERVICES COMPLY WITH PERFORMANCE RUN FOR TROUBLESHOOTING RIGHT HAND ENGINE.										
		PERFORMED ENGINE PERFORMANCE RUN. FOUND RIGHT HAND ENGINE NOT MAKING										

Continued on Next Page

The Aviation Professionals



1575 West Commercial Blvd.
Fort Lauderdale Executive Airport
Florida 33309
(954) 491-3170 • FAX (954) 771-0281

WORK ORDER INVOICE

WORK ORDER: 80/30763

TURBINE SERVICES

FAA Certified Repair Station WD4R618M

PAGE NUMBER	11
DOCUMENT NUMBER	351229
DATE	6/29/99

TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
T SUITE 120 SOUTH
O TOWN & COUNTRY MO 63017

Registration : N338AS
Unit : N338AS
Make : KING AIR
Model : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00 LYNN
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe		Jeffrey B. Grothe		
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B. O.	T. A. X.	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
	POWER . SEE	ITEM #20. Operation 0017 Totals:										.00
18	TURBINE SERVICES	BENCH CHECK LEFT AND RIGHT BLEED VALVE.										
		BENCH TESTED LEFT HAND AND RIGHT HAND BLEED VALVES. NO LEAKING FROM DIAPHRAGM NOTED. RIGHT HAND BLEED VALVE NEEDS OVERHAUL. SEE ITEM #19. Labor Totals Operation 0018 Totals:										.00 .00
19	TURBINE SERVICES	REMOVE BLEED VALVE P/N 3020049 S/N 077 AND SEND TO UTC FOR OVERHAUL.										
		REMOVED AND SENT TO UTC. REINSTALLED BLEED VALVE P/N 3020049 S/N 077 IN ACCORDANCE WITH PRATT & WHITNEY MAINTENANCE MANUAL P/N 3015442 CHECKS GOOD AT THIS TIME. Labor Totals Operation 0019 Totals:				Hour		3.50	58.00	NET	58.00	203.00 203.00
20	TURBINE SERVICES	REMOVED RIGHT HAND ENGINE AND SEND TO UTC FOR RESHIM AND TEST CELL RUN.										
		REMOVED AND SENT TO UTC. RECEIVED REPAIRED ENGINE, INSTALLED OEC COMPONENTS. INSTALLED ON AIRCRAFT IN ACCORDANCE WITH PRATT & WHITNEY MAINTENANCE MANUAL. PERFORMED LEAK CHECK AND RUN UP, CHECKS GOOD AT THIS TIME. Labor Totals Parts Section:										1500.00

Continued on Next Page.

The Aviation Professionals



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WORK ORDER INVOICE

WORK ORDER: 80/30763

TURBINE SERVICES

FAA Certified Repair Station WD4R618M


PAGE NUMBER	12
DOCUMENT NUMBER	351229
DATE	6/29/99

TQ & T-5 CALIBRATION/SPLIT ENGINES FOR EVAL

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Registration : N338AS
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A/C Total Time : 1,325.50
Flight Ckd By : Not Required

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE				
COD			DELIVERED	30763	5/06/99	5/10/99		Michael D. O'Keeffe			Jeffrey B. Grothe	
IN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B.O.	TAX	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
	2380	OIL, EXXON	ATOCK-379			Quart		12.00	9.40	NET	9.40	112.80
	T-SOLV	CLEAR DEGREASER	379-STOCK			Each		2.00	7.95	NET	7.95	15.90
		Parts Totals										128.70
		Operation 0020 Totals:										1628.70
998		TURBINE SERVICES										
	CORE/CHARGE CREDIT											
		Operation 0998 Totals:										.00
999		TURBINE SERVICES										
	THE ITEM IDENTIFIED ABOVE WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT FAA REGULATIONS AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIR ARE ON FILE AT THIS AGENCY UNDER THIS WORK ORDER. THIS WORK ORDER IS PART OF THE PERMANENT AIRCRAFT RECORD.											
	AUTH. SIGNATURE: 											
	BANYAN AIR SERVICE		DATE: 6-29-99									
	FAA APPROVED REPAIR STATION WD4R618M											
	M83248-1-010	Parts Section: O-RING	170			Each		35.00	.45	NET	.45	15.75
		Parts Totals										15.75
		Operation 0999 Totals:										15.75
Continued on Next Page												

Continued on Next Page

The Aviation Professionals

**1575 West Commercial Blvd.
Fort Lauderdale Executive Airport
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(954) 491-3170 • FAX (954) 771-0281**

WORK ORDER INVOICE

WORK ORDER: 80/30763

TURBINE SERVICES

FAA Certified Repair Station WD4R618M

TQ & T-5 CALIBRATION/SPLT ENGINES FOR EVAL

B
I 5466
L JODA FINANCIAL GROUP
L DAVID STONE
14323 S OUTER 40 ROAD
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S
H 5466
I JODA FINANCIAL GROUP
P DAVID STONE
14323 S OUTER 40 ROAD
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Registration : N338AS
Unit         : N338AS
Make        : KING AIR
Model       : B90
Serial Number : LJ493
Flight Recorder: 1,325.50
F.R. Changed : .00
A/C Total Time : 1,325.50
Flight Ckd By : Not Required

```

TERMS		REFERENCE NUMBER	SHIP VIA	ORDER NO.	ORDERED	REQUESTED	SHIPPED		CUSTOMER REPRESENTATIVE			
COD			DELIVERED	30763	5/06/99	5/10/99	Michael D. O'Keeffe			Jeffrey B. Grothe		
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	B O	T A X	QUANTITY PER	PRICE PER	Quantity	List/UOM	Discount	Sell/UOM	Extended
						TURBINE	SERVICES		Total:			73,888.24

The Aviation Professionals



5466

Crew Leader. Jeff
Date: 5/6

Owner Joda Financial Make & Model B90 Reg # N338AS
Hobbs/Tach Time 1325.5 WO # 30763 S/N LJ 493
Arrival Date 5/6 Departure Date _____ Keys _____
Log Books _____ Phone Frank Robin Barry Stone
LON Star Joda Terms COD

WORK
REQUISITION

DISCREPANCY SHEET

MECH INSP

ITEM 1	perform TQ and T5 calibration + performance run
ACTION TAKEN	performed TQ verification, no adjustment required. performed T5 verification, both ind. required adjustment Adjusted ITT INDICATORS 1/4" Beech 90 Maintenance manual
ITEM 2	Split both engines and remove CT disks for evaluation + Reinstall after action see Item 3 + 4
ACTION TAKEN	Split left and Right Engines at C-flange and removed left and Right CT Disks for evaluation
ITEM 3	Remove HSI components from LH engine + Reinstall HSI components after repair.
ACTION TAKEN	Removed L/R eng HSI Components for evaluation + Repair and Reinstalled after repairs 1/4" PTO-20 MAINT MANUAL
ITEM 4	Remove HSI components from RH engine + Reinstall HSI components after repair.
ACTION TAKEN	Removed R/L eng HSI Components for repair and Reinstalled after repair 1/4" PTO 20 - MAINT. MANUAL

DISCREPANCY SHEET

WORK REQUISITION

MECH INSP

OPS No. 5	APC No.	Tech.	disassemble, rework, reassemble, machine 4H inner exit duct assy	MECH	INSP
<p><i>Disassembled reworked, Reassembled using 4 overhauled CT pins</i></p> <p>ACTION TAKEN <i>Waxes + Segments Machined to ID of 8.574" & repaired shroud</i></p>					
OPS No. 6	APC No.	Tech.	disassemble, rework, reassemble, machine RH inner exit duct assy	MECH	INSP
<p><i>Disassembled reworked, Reassembled using 4 overhauled CT pins</i></p> <p>ACTION TAKEN <i>Waxes + Segments and machined to ID of 8.574"</i></p>					
OPS No. 7	APC No.	Tech.	deblade, reblade, true and balance LH CT disk	MECH	INSP
<p><i>BLADED New DISK Trued + Balanced to 8.550 (SEE 8130)</i></p> <p>ACTION TAKEN <i>using 58 new blades</i></p>					
OPS No. 8	APC No.	Tech.	deblade, reblade, true and balance RH CT disk	MECH	INSP
<p><i>BLADED, Disk (customer furnished) using 58 new blades Trued + Balanced to 8.550 (SEE 8130)</i></p> <p>ACTION TAKEN <i>mechanical disk</i></p>					
OPS No. 9	APC No.	Tech.	repair LH power section T-5 system	MECH	INSP
<p><i>Tested T5 system found 4H harness and Bladder weak + shorted</i></p> <p>ACTION TAKEN <i>All probes ARE SAFETIED + SPACED INCORRECTLY. INSTALLED HARNESS PIN 3040110 S/N NR12813 AND BUSBAR PIN 3024120 S/N 8P104 AND SAFETIED AS REQ. ALL Removed all probes and reshined properly tested OK.</i></p>					
OPS No. 10	APC No.	Tech.	repair RH power section T-5 system	MECH	INSP
<p><i>Tested R/H T5 system found Harness shorted and 1 Thermocouple probe does not respond. Busbar Broken All probes are SAFETIED + SPACED INCORRECTLY. INSTALLED Busbar PIN 3024120 S/N 4870 AND HARNESS PIN 3040110 S/N NR12814 MX. Removed all probes reshined tested OK</i></p> <p>ACTION TAKEN</p>					
OPS No. 11	APC No.	Tech.	Send RH combustion liner out for repair	MECH	INSP
<p><i>sent R/H Combustion liner P/N 3023174 S/N 2241 to Turbine Weld for Repair. Received same P/N /SN after Repair.</i></p> <p>ACTION TAKEN</p>					

DISCREPANCY SHEET

WORK REQUISITION

MECH INSP

OPS No. 12	APC No.	Tech.	Send LH Shroud housing out for repair		
ACTION TAKEN			sent LH Shroud housing P/N 3020759 S/N VNR TO Tuning for repair Received same P/N + S/N after repair		
OPS No. 13	APC No.	Tech.	Clean, flow and PSI check LH fuel nozzles	CS	
ACTION TAKEN			Pre flowed 14 tips found 8 streaking Disassembled cleaned Reassembled & functionally checked found 8 tip still streaking. REPLACED 8 TIPS Pressure and Functionally checked IAW PW MAINTANCE Manual PN# 3015442 Nozzle PN 27200-1 REPLACED SEATH PN 3024126		
OPS No. 14	APC No.	Tech.	Clean, flow and PSI check RH fuel nozzles	CS	
ACTION TAKEN			Pre flowed 14 Nozzel found 7 tips streaking Disassembled Cleaned Reassembled & functionally checked found 7 tip streaking. REPLACED 7 TIPS PN 27200-1 Pressure AND Functionally checked IAW PW MAINTANCE Manual PN# 3015442		
OPS No. 15	APC No.	Tech.	Reinstall Power Sections after Repair		
ACTION TAKEN			— SEE ITEM 2 —		
OPS No. 16	APC No.	Tech.	Split Engine after Run In		
ACTION TAKEN			Resplit L/H and R/H engs after Break in Runs per evaluation removed CT Disks Rebalanced L/H CT DISK. Reinstalled Disk and Both PWR SECTIONS.		
OPS No. 17	APC No.	Tech.	LW trouble Performance Run. for		
ACTION TAKEN			trouble shooting R/H eng Performed Eng. Performance Run found R/H eng NOT making power. See ITEM 20		
OPS No. 18	APC No.	Tech.	Bench check Left + Right Bleed Valve		
ACTION TAKEN			L/H 3027519 S/N 16134 Bench tested L/H and R/H Bleed valve no leaking from Diaphragm - noted. R/H Bleed Valve needs overhaul see "The Aviation Professionals" ITEM 19.		

DISCREPANCY SHEET

WORK REQUISITION			MECH	INSF
OPS No. 19	APC No.	Tech. <i>[Signature]</i>		
<p>Remove Bleed Valve P/N 3020049 S/N 077CS and send TO UTC for overhaul + Reinstall Repaired sent to UTC Reinstalled BLEED VALVE P/N 3020049 S/N 077 IAW PAW MAINTANCE MANUAL P/N 3015442 Checks good AT THIS TIME.</p>				
ACTION TAKEN				
OPS No. 20	APC No.	Tech. <i>[Signature]</i>		
<p>Remove R/H eng and send to UTC for Reprim and Test Cell Run + Reinstall Repaired sent to UTC RECEIVED REPAIRED ENGINE GEC components. INSTALLED ON AIRCRAFT IAW PAW MAINTANCE MANUAL P/N 3015442 AND AIRFRAME KIM AIR B-10 MAINTANCE MANUAL PERFORMED LEAK CHECK AND SIGN UP Checks good AT THIS TIME</p>				
ACTION TAKEN				
OPS No. 21	APC No.	Tech. <i>[Signature]</i>		
<p>Remove R/H eng and send to UTC</p>				
ACTION TAKEN				
OPS No.	APC No.	Tech.		
ACTION TAKEN				
OPS No.	APC No.	Tech.		
ACTION TAKEN				
OPS No.	APC No.	Tech.		
ACTION TAKEN				
OPS No.	APC No.	Tech.		
ACTION TAKEN				

DATE	RECORDING	TOTAL	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS
99	TACH	TIME IN	ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF
1991	TIME	FLIGHT	MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)

DATE 99 19	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
6-25	1326.5		24,874.2	S.M.O.H. 2426.2, S.H.S.T. 547.7 CSM
	59,927	CSO	4235	'COMPLIED WITH TORQUE AND T5 CALIBRATION,
				PERFORMED THE FOLLOWING REPAIRS ON THE HOT SECTION: INSTALLED
				REPAIRED C.T. SHROUD HOUSING P/N 3020259 INSTALLED REPAIRED
				INNER EXIT DUCT ASSEMBLY P/N 3018490 (4 OVERHAULED C.T. VANES
				P/N T019551, 13 EACH SEGMENTS P/N T020485 AND 1 EACH SEGMENT P/N
				T020484) INSTALLED REPAIRED C.T. DISK ASSEMBLY (NEW DISK
				P/N 3013511 S/N 40B463 WITH NEW (58) TURBINE BLADES P/N
				T023401 AND TRUED AND BALANCED) INSTALLED CLEANED AND FLOW
				CHECKED FUEL NOZZLES (1 EACH 3010149 AND 13 EACH 3010145) INST-
				ALLED BENCH CHECKED BLEED VALVE P/N 3027249 S/N 1C107, INST-
				ALLED NEW T5 HARNESS P/N 3010110 S/N NR12813 AND OVERHAULED T5
				THERMOCOUPLE BUS BAR P/N 3024120 S/N W. D. 30263 ON FILE
				8F104 INSTALLED NEW SEALING RING P/N [REDACTED]
				3024979PR. RAN ENGINE AND CHECKED
				FOR LEAKS AND PERFORMANCE. OPS
				CHECKED GOOD. END

BANYAN AIR SERVICE
1575 W. Commercial Blvd.
FL. Lauderdale, FL 33309
FAA CRS WD4R618M PH. 954-491-3177

FIA CRS WD4R818M PH. 954-491-3170

PT6A-20

[illegible]

FAA CRS WD4R818M PH. 854-491-3170

1. ~~THE AGES GROUP~~, L.P. - PART OR MATERIAL CERTIFICATION FORMATA
Specifications 106

2. Seller's Name The AGES Group, L.P.

3. Reference #

87XJ7912

4. Organization:



THE AGES GROUP
645 Park of Commerce Way
Boca Raton, FL 33487

Phone #: (561) 998-9330
Fax #1 (561) 998-9714
SITA/Wire Code FLLGD XD
Status Parts Surplus Supplier



THE AGES GROUP

5a. Seller's Contract #

228

5b. Buyer's Contract #

50508290

6. Item	7. Description	8. Manufacturer & Part #	9. Eligibility	10. Qty	11. Serial/Batch	12. Status
1	DISK	P&W 3013511	VARIOUS	1	40B463	NEW

THE ABOVE REFERENCE MATERIAL WAS NOT OBTAINED FROM ANY GOVERNMENT OR MILITARY SOURCE, AND WAS NOT INVOLVED IN ANY AIRCRAFT ACCIDENT, FIRE OR CRASH

13a. Remarks

"The AGES GROUP, L.P. CERTIFIES THAT WE ARE AN ACCREDITED DISTRIBUTOR MEETING THE ASA-100 QUALITY STANDARD, UNDER THE PROVISIONS OF (AC 00-56)."

13b. Obtained From

145- UNC ENGINE & ENGINE PARTS, INC.

13c. Last Certified Agency

N/A

14. New Parts/Material Certification

The following signature attests that the part(s) or material(s) identified above was (were) manufactured by an FAA Production Approval Holder (PMA) or to an industry or commercial standard

18. Used. Repaired or Overhauled Parts Certification

The following signature attests the documentation specified above and attached is accurate with regard to the item(s) described.

15. Signature

For The AGES Group
Quality Assurance

19. Signature

For The AGES Group
Quality Assurance

16. Name

PAULA BAILEY

17. Date

5-21-99

20. Name


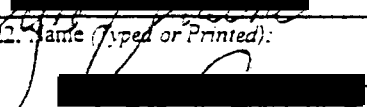
21. Date

NOTICE: The above signature binds the signer and the SELLER to the accuracy of the information provided in the FORM. Should the information provided in this Form contain inaccuracies or misrepresentations, the signer and the seller may be liable for damages and are subject to criminal prosecution under state and federal law.

AQA005 REV 0 5/1/98

BANYAN AIR SERVICES, INC.

44

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. 30763		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number 30763		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1.	CT DISK ASSY	3013511	PT6-20	1.	403463	REPAIR
13. Remarks REPAIR BLADED NEW DISK P/N 3013511 S/N 403463 WITH 58 CT BLADES NEW COND P/N-T023401. TRIED AND BALANCED TO O.D. 8.550 1/A/W PT6-20 MAINT MANUAL. P/N 3015442,						
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new. 0 - 0						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD4R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): 		23. Date: 6/4/99

FAA Form 8130-3 (11-93)

* (Optional) Installer must cross check eligibility with applicable technical data.

LEFT

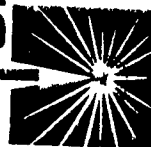
PARTIAL REPAIR

30763/1

FAA CERT. #WF5R299N

**TURBINE
WELD**

INC.
402 Substation Road
Venice, Florida 34292
(941) 485-5113
FAX (941) 485-5827



CUSTOMER		PART NAME	
Banyan Air Service		CT Shroud Housing	
I/N	S/N	P/O	
3020259	N/A	80015870	

Remarks

Reb O'Humpin 3011403

Inspector



Date

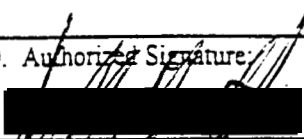
5/20/99

Only the work requested by the customer and described in the job order referenced on the face of this tag has been performed, inspected and accepted to repair methods in accordance with F.A.A. Approved procedures. The customer must perform further inspection of the part(s) before use to determine serviceability.

W/O NO. 330124

Signed for Turbine Weld Inc.


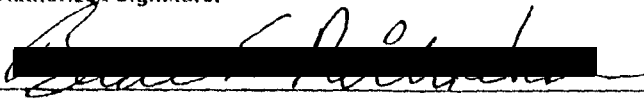
BANYAN AIR SERVICES, INC.

1. UNITED STATES		2. FAA FORM 8130-3 AIR WORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. 30763		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number 30763		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1.	INNER EXIT DUCT ASSY	3018490	PT6-20	1.	UNK	Repair
13. Remarks: DISASSEMBLED, CLEANED, REWORKED, AND REASSEMBLED USING 4 OFF COND CT VANES P/N TO19551 AND 13 SEGMENTS P/N TO20485 AND 1 SEGMENT P/N TO20484 AND MACHINED TO ID OF 8.574 1/A/W PT6A-20 MANUAL P/N 3015442						
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD4R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): JEFF CROTHES		23. Date: 6/4/92

FAA Form 8130-3 (11-93)

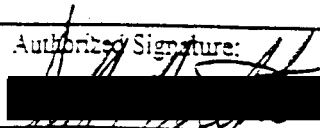
(Optional) Installer must cross check eligibility with applicable technical data.

30703

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				3. SYSTEM TRACKING REF. NO. R90030	
4. ORGANIZATION Dallas Airmotive, Inc., Regional Turbine Shop • 1060 E. Northwest Highway Grapevine, TX 76051						5. WORK ORDER, CONTRACT, OR INVOICE NUMBER: R90030	
6. ITEM	7. DESCRIPTION	8. PART NO.	9. ELIGIBILITY*	10. QTY.	11. SERIAL/BATCH NO.	12. STATUS/WORK	
1	Sheath	3024126	E4EA	14	—	Newly 114	
13. REMARKS: TT: — TSO: 0 CSN: — CSO: 0							
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> INSPECTED PER OVERHAUL MANUAL 3011407 </div> <div style="text-align: center; margin-top: 20px;">  </div>							
Details on file at this Repair Station under work order referenced in blocks 3 & 5. Inspector _____ Date JUL 29 '96							
LIMITED LIFE PARTS MUST NORMALLY BE ACCOMPANIED BY MAINTENANCE HISTORY INCLUDING TOTAL TIME/TOTAL CYCLES/TIME SINCE NEW.							
14. NEW <input type="checkbox"/> NEWLY OVERHAULED <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness regulations. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.				19. Return to Service in Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature:		16. FAA Authorization No:		20. Authorized Signature:		21. Certificate Number	
						YRR8491L	
17. Name (typed or printed):		18. Date:		22. Name (typed or printed):		23. Date:	
				BRUCE S. RICHARDSON		JUL 29 '96	

BANYAN AIR SERVICES, INC.

L/H

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. 30763		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number 30763		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1	Flow Divider	301044	PT6A-20	1	019	INSP
2	Fuel Manifold	3010145	PT6A-20	13	N/A	INSP
13. Remarks CLEANED, PRESSURE AND FUNCTIONALLY CHECKED IN ACCORDANCE WITH THE PRATT & WHITNEY MAINTENANCE MANUAL PN 3015442 FOUND 8 TIPS STREAKING REPLACED 8 TIPS PN 27700-1 PRESSURE AND FUNCTIONALITY CHECK. REPLACED 1 SHEATH PN 304126						
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
NOTE: In case of parts to be exported, the special requirements of the importing country have been met.						
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD-R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): JEFF ORSINI		23. Date: 5/18/99

FAA Form 8130-3 (11-93)

* (Optional) Installer must cross check eligibility with applicable technical data.

UNITED STATES

FAA FORM 8130-3

AIRWORTHINESS APPROVAL TAG

U.S. Department of Transportation
Federal Aviation Administration

3 System Tracking Ref No

99-0089

4 Organization

TURBO PRODUCTS A DIVISION OF CONQUESTS INC

110 POND MEADOW ROAD IVORYTON CT 06442 PO 812NE-D

5 Work Order, Contract, or Invoice Number

PAGE 1 of 2

402053 (4-7161-7)

6 Item	7 Description	8 Part Number	9 Eligibility	10 Quantity	11 Serial/Batch Number	12 Status/Work
01	RING SEGMENT CL-7	T020485	PTBA-66A 6B 20 ZOA 20B	13	N/A	NEW

13 Remarks

AIRWORTHINESS APPROVAL - PARTS THIS FORM IS NOT AN EXPORT APPROVAL

Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.

14

New ☒Newly Overhauled ☐

Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness.

NOTE: In case of parts to be exported, the special requirements of the importing country have been met.

19

Return to Service in Accordance with FAR 43.9

Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.

15 Signature

16 FAA Authorization No

20 Authorized Signature

21 Certificate Number

17 Name (Typed or Printed)

18 Date


22 Name (Typed or Printed)

23 Date

DAVID J LOTHROP

NE 841076

4/13/99

1. UNITED STATES		FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration				3. System Tracking Ref. No. S.O. 000387-02	
4. Organization Semco Instruments , Inc. 25702 Rye Canyon Road Valencia , Calif . 91355						5. Work Order, Contract, or Invoice Number: Invoice# 1310	
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work	
001	THERMOCOUPLE BUS BAR	3024120	VARIOUS	1	SN 4870	OVERHAULED	
13. Remarks See attached Analysis/Teardown Report Reference Procedure <u>RP 3024120</u>							
<i>Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.</i>							
14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.				19. Return to Service in Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature		16. FAA Authorization No.:		20. Authorized Signature: 		21. Certificate Number: XEMR401L	
17. Name (Typed or Printed):		18. Date:		22. Name (Typed or Printed): Robert Stewart		23. Date: 3-23-99	



L+R

Precision rings incorporated

5611 Progress Rd * PO Box 421189 * Indianapolis, IN 46242 * Phone 317-247-4786 * Fax 317-248-9781

CERTIFICATION OF CONFORMANCE

PRECISION RINGS, INC. HEREBY CERTIFIES THAT THE BELOW LISTED ITEMS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL CUSTOMER ORDER REQUIREMENTS, SPECIFICATIONS AND APPLICABLE DRAWINGS.

ATTACHED ARE MATERIAL TEST REPORTS, HEAT TREAT CHARTS, INSPECTION DATA SHEETS AND OTHER DOCUMENTS AS REQUIRED BY CUSTOMER PURCHASE ORDER.

PRECISION RINGS, INC. FURTHER CERTIFIES THAT DURING THE MANUFACTURING PROCESSES, TESTS AND INSPECTIONS, THE PARTS DID NOT COME IN CONTACT WITH MERCURY OR ANY OF ITS COMPOUNDS NOR WITH ANY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF CONTAINMENT.

CUSTOMER NAME PRIME TURBINES

PURCHASE ORDER NO. P08495 ITEM NO. 001 PO NO. -

DRAWING/PART NO. 3024979PR REVISION B

PRECISION RINGS PART NO. - REVISION -

PRECISION RINGS, INC. CODE NO. 99121 QUANTITY SHIPPED 2 PCS

LOT NO. 11556-000 SERIAL NO. - DESCRIPTION RING, SEALING

MFB (MATERIAL REVIEW DOCUMENT WHEN APPLICABLE) -

MATERIAL (CHECK ONE) PWC ENGINE MODELS: PT6A-6, -11, -11AG, -15AG, -20, -21, -25, -25A, -27, -28, -110, -112

1.) - MATERIAL WAS FURNISHED BY CUSTOMER

2.) ✓ MATERIAL WAS FURNISHED BY PRECISION RINGS, INC.

MATERIAL SPECIFICATION AMS 5759 SPECIFICATION REVISION J

RAW MATERIAL HEAT NO. 203700 MATERIAL CONDITION HARDENED

SPECIAL PROCESS

PROCESS PERFORMED	SPECIFICATION	SPEC. REV.	SUPPLIER AND CODE
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

DATE SEPTEMBER 28, 1998 BY Greg D. Edens SWORN TO BEFORE ME THIS

28TH DAY OF SEPTEMBER, 19 98 QUALITY CONTROL MANAGER MY COMMISSION EXPIRES AUGUST 27, ~~XXXX~~ 2001.

STATE OF INDIANA; COUNTY OF MARION Sandra K. Poremba

SANDRA K. POREMBA

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.

"EQUIPMENT CONTAINING MERCURY OR MERCURY COMPOUNDS HAS NOT BEEN USED FOR FABRICATION, PACKAGING, EXAMINATION OR TESTING OF PARTS, ASSEMBLIES OR MATERIAL SUPPLIED ON THIS ORDER."

RIGHT



SERVICEABLE TAG

FAA CERT. #WF5R299N

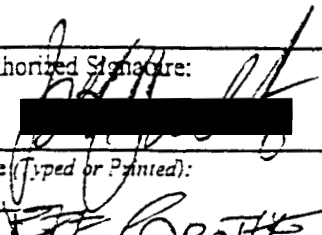
CUSTOMER <i>Bryan Air Service</i>		PART NAME <i>Comb Lines</i>
P/N <i>3023774</i>	S/N <i>2241</i>	P/O <i>80015000</i>

Remarks: *Rebuilt P/N 3011403*
Inspector: *[Signature]* **INSP. 2**
Date: *5/15/99*
Above part was overhauled and/or repaired in accordance with current Regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under

W/O NO. *32977*


[Signature]
Signed for Turbine Weld, Inc.
Eric Cote

BANYAN AIR SERVICES, INC.

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. <div style="text-align: center; font-size: 1.2em;">30763</div>		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number <div style="text-align: center; font-size: 1.2em;">30763</div>		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1.	INNER Exit DUCT Assy	3018490	PT6-20	1.	UNK	Repair
13. Remarks <div style="font-family: monospace; font-size: 1.1em;"> DISASSEMBLED, CLEANED, REWORKED REASSEMBLED USING 1/2 9/4 COND CT VANES P/N TO19551 AND 13 SEGMENTS P/N TO26485 AND 1 SEGMENT P/N TO20484 AND MACHINED TO ID OF 8.574 1/4" PT6-20 MANUAL P/N-3015442 </div>						
<i>Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.</i>						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD4R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): JEFF BROTH		23. Date: 6/4/95

FAA Form 8130-3 (11-93)

*(Optional) Installer must cross check eligibility with applicable technical data.

1. United States		2. FAA Form 8130-3 Airworthiness Approval Tag U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ret. No. Traveler 9021462-1 P/S 075005		
4. Organization Engelhard Surface Technologies "G2PR726J" 12 Thompson Rd. East Windsor, CT 06088				5. Work Order, Contract, or Invoice Number P.O. 15245		
6. Item	7. Description	8. Part Number	9. Eligibility	10. Quantity	11. Serial/Batch Number	12. Status/Work
-----	VANES	TO19551	PT6A-20	26	32978	Repaired
13. Remarks STRIPPED PER SPOP 308 & OP 14						
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.						
14. New/Newly Overhauled Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was(were) manufactured in accordance with FAA approved design data and airworthiness regulations. Note: In case of parts to be exported, the special requirements of the importing country have been met.				19. Return to Service in Accordance with Far 43.9 Certifies that the work specified in block 13 (or attached above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is(are) approved for return to service.		
15. Signature		16. FAA Authorization No.		20. Authorized Signature 		21. Certification No. G2PR726J
17. Name (Typed/Printed)		18. Date		22. Name (Typed/Printed) WILLIAM MOWREY		23. Date 10/29/98

FAA Form 8130-3 (11-93)
eligibility with applicable technical data

*(Optional) Installer must cross check

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration				3. System Tracking Ref. No. 985501	
4. Organization AMK Welding, Division of Dynamic Materials Corporation 283 Sullivan Avenue, P.O. Box 663 South Windsor, CT 06074-0663						5. Work Order, Contract or Invoice Number. P.O. # 15497	
6.	7.	8.	9.	10.	11.	12.	
Item	Description	Part Number	Eligibility *	Quantity	Serial / Batch Number	Status / Work	
1	GUIDE VANE	T019551	JN# 32978	1	S/N: N/A	REPAIRED	
13. Remarks <div style="text-align: center;">WELDED PER PWA 16 & AMK WPS-1157</div>							
<i>Limited life parts must be accompanied by maintenance history including total time / total cycles / time since new.</i>							
14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met. 				19. RETURN TO Service in Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature		16. FAA Authorization No.		20. Authorized Signature:		21. Certificate Number:	
17. Name (Typed or Printed)		18. Date:		22. Name Typed or Printed ROBERT C. SANBORN		23. Date: 12/08/98	

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration				3. System Tracking Ref. No. 964201	
4. Organization AMK Welding, Division of Dynamic Materials Corporation 283 Sullivan Avenue, P.O. Box 663 South Windsor, CT 06074-0663						5. Work Order, Contract or Invoice Number. P.O.# 15278	
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial / Batch Number	12. Status / Work	
1	GUIDE VANE	T019551	JN# 9007Q	7	32978	REPAIRED	
13. Remarks <div style="text-align: center; margin-top: 100px;"> WELDED IAW PWA 16 & AMK-1157 </div>							
Limited life parts must be accompanied by maintenance history including total time / total cycles / time since new.							
14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.				19. <div style="text-align: center; margin-top: 20px;"> RETURN TO Service in Accordance with FAR 43.9 </div> Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature		16. FAA Authorization No.		20. Authorized Signature		21. Certificate Number:	
17. Name (Typed or Printed)		18. Date:		22. Name Typed or Printed ROBERT C. SANBORN		23. Date: 11/09/98	

UNITED STATES

FAA FORM 8130-3

AIRWORTHINESS APPROVAL TAG

U.S. Department of Transportation
Federal Aviation Administration

3. System Tracking Ref. No.

99-0011

4. Organization

TURBO PRODUCTS A DIVISION OF DONCASTERS INC.

110 POND MEADOW Rd. IYOKYTON CT 06442

5. Work Order, Contract, or Invoice Number:

63592 (4-7458)

6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
01	TURBINE Vane	T019551	PTBA-66A6B 20 20A 20B	26	N/A	REPAIR

13. Remarks

Vanes RE-classified PER TP-1500 (#7458P)
Ref JOB# 32978

Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.

14. New ☐
Newly Overhauled ☐

Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness.

NOTE: In case of parts to be exported, the special requirements of the importing country have been met.

19.

Return to Service in Accordance with FAR 43.9

Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.

15. Signature

16. FAA Authorization No.

20. Authorized Signature:

21. Certificate Number:

17. Name (Typed or Printed)

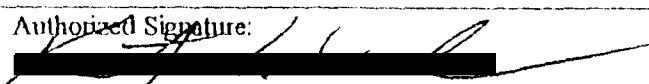
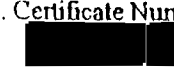
18. Date:

22. Name (Typed or Printed)

23. Date:

DAVID J LATHROP

1/7/99

UNITED STATES		FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration				3. System Tracking Ref. No. 9007Q - 32978	
4. Organization DEAN MACHINE PRODUCTS, INC. 102 Colonial Road Manchester, CT 06040						5. Work Order, Contract, or invoice Number: P/O R16042	
6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Batch Number	12. Status/Work	
1	C.T. Vane	FAA PMA T019551	PT6A	26	NSN	OVERHAULED	
13. Remarks <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">885-3900</div> <div style="text-align: center;"> <p>Inspected and repaired I.A.W. FAA approved Inspection and Overhaul Procedure (DM-006) for Compressor Turbine Vanes manufactured by Turbo Products, Inc. Dated March 27, 1997.</p> </div> </div>							
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.							
14. <input type="checkbox"/> New <input type="checkbox"/> Newly Overhauled Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.				19. Return to service in accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature			16. FAA Authorization No.:	20. Authorized Signature: 		21. Certificate Number: 	
17. Name (Typed or Printed)			18. Date:	22. Name (Typed or Printed) Kenneth S. Webber		23. Date: January 7, 1999	
* (Optional) Installer must cross check eligibility with technical data.							
Airworthiness Approval Tag User / Installer Responsibilities							
It is important to understand that the existence of this document alone does not automatically constitute authority to install the part / component / assembly.							
Where the user / installer work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in Block 1 it is essential that the user / installer ensures that his / her Airworthiness Authority accepts the parts / components / assemblies from the Airworthiness Authority of the country specified in Block 1.							
Statements in block 14 and 19 do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user / installer before the aircraft may be flown.							
The FAA Form 8130-3 and JAA Form One are equivalent. Other countries such as Canada also have acceptable documents.							

UNITED TURBINE CORP.
8045 NW 90 STREET
MIAMI, FL 33166
PHONE (305) 885-3900 FAX (305) 885-0472
FAA/JAA APPROVED REPAIR STATION NO. UTUR555L

WORK ORDER FORM

CUSTOMER BANYAN AIR SERVICE _____ W/O 1832 _____ P/O 80015150 _____

UNIT NAME I.E DUCT ASSEMBLY P/N 3020259 S/N _____ NSN: _____

THIS UNIT WAS REPAIRED _____ IN ACCORDANCE WITH
MANUFACTURER'S OVERHAUL MANUAL P/N 3011403 REV. 14

WITH THE FOLLOWING SERVICES:

DISASSEMBLE ☒ CLEAN ☒ INSPECT ☒ REPAIR ☒
PAINT N/A ☐ ASSEMBLE ☒ BALANCE ☒ TEST ☒

PARTS REPLACED

P/N	DESCRIPTION	QTY	P/N	DESCRIPTION	QTY
3019551	VAVES	16			
3020485	SEGMENTS	13			
3020484	SEGMENTS	1			

MODIFICATIONS C/W NONE

SHOP FINDINGS REPLACE 16 VANES AND 14 SEGMENTS. CHECK BALANCE C/T
DISK P/N 3013511 S/N 2C714 AND INSTALL IN ENGINE S/N PCE-22008
AND FUNCTIONALLY TESTED. NOTE C/T CLASS 12.2


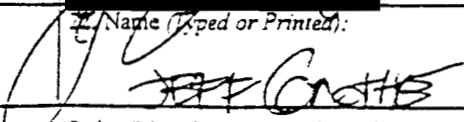
INSPECTOR'S SIGNATURE

DATE 06/10/99

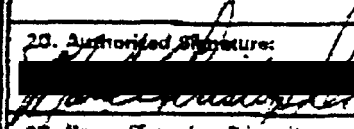
FORM NO. 501
REV 10/16/96



BANYAN AIR SERVICES, INC.

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. <div style="text-align: center; font-size: 1.2em;">30763</div>		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number <div style="text-align: center; font-size: 1.2em;">30763</div>		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1.	CT-DISK ASSY	3013511	PTG-20	1.	22714	Repair
13. Remarks BLADED CUSTOMER FURNISHED DISK ON COND P/N 3013511 S/N 22714 USING SB NEW COND CT BLADES P/N - TO 23401 TRUED AND BALANCED TO O.D. OF 0.549 1/A/W PTG-20 MANUAL P/N 3015442.						
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD4R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): 		23. Date: 6/4/99
FAA Form 8130-3 (11-93) (Optional) Installer must cross check eligibility with applicable technical data.						

Customer Supplied

1. United States		2. FAA FORM 8130-3 Airworthiness Approval Tag U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. N06421	
4. Organization <i>DallasAirmotive.</i>		Dallas Airmotive, Inc. 8114 Forest Park Road Dallas, TX 75236-6498		5. Work Order, Contract, or Invoice Number: N06421	
6. Item 1		7. Description #1 CT DISK		8. Part Number 3013511	
9. Eligibility* PT6 - TBV BY INST.		10. Qty. 1		11. Serial/Batch No. 2C714	
				12. Status/Work INSPECTED	
13. Remarks TT: 5019 TSO: 0.0 CSM: 5287 CSO: 0.0 OVERHAUL INSPECTED LAW OHM 3011403 MARKED DIA: 6.2886 MEASURED DIA: 6.2839 <div style="text-align: center; font-size: 4em; transform: rotate(-10deg); opacity: 0.5;">COPY</div>					
Details on file at this Repair Station under work order/s referenced in block 3 & 5. Inspector JAMES E. BREVILL 2 280 Date 10/27/98					
LIMITED LIFE PARTS MUST BE ACCOMPANIED BY MAINTENANCE HISTORY INCLUDING TOTAL TIME/TOTAL CYCLES/TIME SINCE NEW					
14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part/s identified above, except as otherwise specified in block 13 was/were manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			19. Return to service in accordance with F.A.R. 43.2 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part/s is/are approved for return to service.		
15. Signature		16. FAA Authorization No.		20. Authorized Signature: 	
17. Name (Typed or Printed)		18. Date		21. Certificate Number: YRRR491L	
				22. Name (Typed or Printed) MARK CHRISTOPHER	
				23. Date 10/27/98	
FAA Form - Airworthiness Approval Tag User/Installer Responsibilities					
It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly. Where the user/installer work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in Block 1 it is essential that the user/installer ensure that No/their Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority of the country specified in Block 1. Statements in block 14 and 19 do not constitute installation certification. In all cases aircraft maintenance records must contain an installer certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown. The FAA Form 8130-3 and JAA Form One are equivalent. Other countries such as Canada also have equivalent acceptable documents.					

AVIAL

AS-CF-PTG-20-1

WORK SPECIFICATION NO.

AVIAL

REPAIR OR DIVERSIFIED SPECIFICATIONS

COMPLIANCE RECORDS

ISSUE NO. 1

PAGE 12 OF 21

PART II MANUFACTURERS BULLETIN COMPLIANCE

ENG SECTION:

W/O NO. 17654 ENG S/B: 24118

BULLETIN	CAT	DESCRIPTION	REMARKS	C/A/PCH/H/A/T/R
1163	R	REWORK COMPRESSOR TURBINE STAGE SEGMENTS		
1164	A	REDESIGNED NO. 2 AND NO. 3 STAGE DISCS	REF: S/B 1094	
1166	R	GRAPHITE VARNISH TO COMPRESSOR PARTS		
1167	CR	DIFFUSED ALUMINIDE BACK PROCESS COATING		
1172	A	IMPROVED COMPRESSOR TURBINE PARTS INNER SUPPORT	IN. COMING- W/ S/B 1182	
1182	A	REVISED OUTER RING DISCS	REF: S/B 1172	
1188	R	MODIFY NO. 2 REAR END COVER		
1191	R	AIR INLET SCREEN MODIFICATION	<i>add</i>	
1207	A	ADDITIONAL PROTECTION TREATMENT ALL "C" PLATED BOLTS & NUTS		
1210	A	REVERSE GROWTH DIMENSION COMPRESSOR TURBINE BLADES		

ENG TYPE PT6A ACCEL 203 SN B26118 W/O NO FT4934 DATE 11-5-85
 TOTAL TIME 1909 STARTS 1909 LANDINGS 1909
 TIME SINCE OVERHAUL 00.0 TO STARTS ZERO TO LANDINGS ZERO

COMPONENT	PART NUMBER	SERIAL NUMBER	MOOSE STANDARD	INSTALLED COMPONENT	
				TOTAL HOURS	TOTAL CYCLES
Disk - Sig. 1 PT	3022511	9150		3909	3909
Disk - Sig. 2 PT	N/A TO THIS ENGINE				
Impeller	3013176	A1746		3909	3909
Spacer - Sig. 1 Compressor	N/A TO MODULE				
Disk - Sig. 1 Compressor	N/A TO MODULE				
Disk - Sig. 3 Compressor	3011713	8423		3909	3909
Disk - Sig. 2 Compressor	3013712	0185		3909	3909
HUB - Rev	3013111	A7898		3909	3909
Disk - CT	3013511	2C714		3158	3327
NOTE REFER TO APPLICABLE SERVICE BULLETIN FOR APPROVED LIFE LIMITS.					

A O NOTE AND SERVICE BULLETIN COMPLIANCE

AIRWORTHINESS DIRECTIVES PREVIOUSLY COMPLIED WITH:

AD 75-11-04, Amend. # 39-2207, dated 5/20/75.
 AD 75-06-01, Amend. # 39-2858, dated 4/1/77.
 AD 80-04-02, Amend. # 39-3693, dated 2/9/80.
 AD 80-08-12, Amend. # 39-3748, dated 4/13/80.

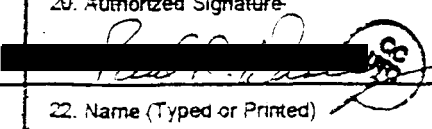

SERVICE BULLETINS COMPLIED WITH:

Reduction Gear: S/B 1039, 1226, 1240, 1248, 1258, 1291, 1318, 1331, 1338, 1339.
 Power Section: S/B 1150, 1228, 1246, 1270, 1339.
 Gas Generator: S/B 1081, 1109, 1166, 1243, 1273.
 Accessory Gearbox: S/B 1082, 1285.
 External & Misc.: S/B 1002, 1203, 1255, 1276.

ACCESSORIES SERVICE BULLETINS COMPLIED WITH:

Fuel Control: (S/N 104836) GT51, GT55.
 Fuel Nozzle: 73-7.

PT6A INSTALLATION RECORD
 LIFE LIMITED ROTATING COMPONENTS
 AND BULLETIN COMPLIANCE

United States		FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration				1832	
4. Organization UNITED TURBINE CORP. 8045 NW 90 STREET MIAMI, FLORIDA 33166 U.S.A.						5. Work Order, Contract or Invoice No. 1832	
6.	7.	8.	9.	10.	11.	12.	
Item	Description	Part Number	Eligibility*	Qty	Serial/Batch No.	Status/Work	
1	BLEED VALVE	3020049		1	A2024	NEWLY OVERHAULED	
13. Remarks OVERHAULED I/A/W MANUFACTURERS OVERHAUL MANUAL P/N 3011403 R-14							
Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.							
14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. Note: In case of parts to be exported, the requirements of the importing country have been met.				19. Return to Service In Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) APPROVED FOR RETURN TO SERVICE.			
15. Signature-		16. FAA Authorization No		20. Authorized Signature		21. Certificate Number	
							
17. Name (Typed or Printed)		18. Date		22. Name (Typed or Printed)		23. Date	
				PAUL R. DISNEY		6/7/99	

* (Optional) Installer must cross check eligibility with applicable technical data

Airworthiness Approval Tag

User/Installer Responsibilities


It is important to understand that the existence of this document alone does not automatically constitute authority to install the part / component / assembly. Where the user/installer work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in block 1, it is essential that the user/installer ensures that his/her Airworthiness Authority accepts parts/components / assemblies from the Airworthiness Authority of the country specified in block 1. Statements in blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

1 UNITED STATES		2 FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration						3 System Tracking Ref No 99-103	
4 Organization TURBO PRODUCE A DIVISION OF DUNSTONS INC 110 POND MEADOW ROAD IVORYTON CT 06442 PQ 812NE-D							5 Work Order, Contract, or Invoice Number: PAGE 1 of 1		
6 Item	7 Description	8 Part Number	9 Eligibility *	10 Quantity	11 Serial/Batch Number	12 Status/Work			
01	TURBO BKT REV "K"	T023401	PT6A-6 GA6B11 11AG, 20, 20A, 20B 21, 25 2SA, 110 11L,	58	N/N	NEW			
13 Remarks									
AIRWORTHINESS APPROVAL - PARTS THIS FORM IS NOT AN EXPORT APPROVAL Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.									
14 New <input checked="" type="checkbox"/> Newly Overhauled <input type="checkbox"/>			19 Return to Service in Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.						
15 Signature [Signature] NE 841024 FOR DJL.			16 FAA Authorization No NE 841076		20 Authorized Signature				
17 Name (Typed or Printed) DAVID J LATHROP			18 Date 4.23.99		21 Certificate Number:				
			22 Name (Typed or Printed)		23 Date:				

* (Optional) Installer must cross check eligibility with applicable technical data

BANYAN AIR SERVICES, INC.

R/H

1. UNITED STATES		2. FAA FORM 8130-3 AIRWORTHINESS APPROVAL TAG U.S. Department of Transportation Federal Aviation Administration		3. System Tracking Ref. No. 30763		
4. Organization Banyan Air Service 1575 W. Commercial Blvd. Fort Lauderdale, FL 33309 (954) 491-3170 Fax (954) 491-1612				5. Work Order, Contract, Invoice Number 30763		
6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
1	Flow Divider	300149	PT6A-20	1	0178	INST
2	FUEL MANIFOLD	3010145	PT6A-20	13	N/A	INST
					...	
13. Remarks <div style="text-align: center;"> <p>CLEANED, PRESSURE AND FUNCTIONALLY CHECKED IN ACCORDANCE WITH THE PRATT & WHITNEY MAINTENANCE MANUAL P/N 301544Z</p> <p>Found 7 TIP STREAKING REPLACED 7 TIPS 22700-1</p> <p>PRESSURE AND FUNCTIONALLY CHECKED</p> </div>						
<i>Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.</i>						
14. New <input type="checkbox"/> N/A Newly Overhauled <input type="checkbox"/>			19. Return to Service in Accordance with FAR 43.9			
Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.			Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.			
15. Signature N/A		16. FAA Authorization No. N/A		20. Authorized Signature: 		21. Certificate No. WD-R618M
17. Name (Typed or Printed): N/A		18. Date: N/A		22. Name (Typed or Printed): J. H. Corbett		23. Date: 5/12/99



L+R

Precision rings incorporated

5611 Progress Rd * PO Box 421189 * Indianapolis, IN 46242 * Phone 317-247-4786 * Fax 317-248-9781

CERTIFICATION OF CONFORMANCE

PRECISION RINGS, INC. HEREBY CERTIFIES THAT THE BELOW LISTED ITEMS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL CUSTOMER ORDER REQUIREMENTS, SPECIFICATIONS AND APPLICABLE DRAWINGS.

ATTACHED ARE MATERIAL TEST REPORTS, HEAT TREAT CHARTS, INSPECTION DATA SHEETS AND OTHER DOCUMENTS AS REQUIRED BY CUSTOMER PURCHASE ORDER.

PRECISION RINGS, INC. FURTHER CERTIFIES THAT DURING THE MANUFACTURING PROCESSES, TESTS AND INSPECTIONS, THE PARTS DID NOT COME IN CONTACT WITH MERCURY OR ANY OF ITS COMPOUNDS NOR WITH ANY CONTAINING DEVICES EMPLOYING A SINGLE BOUNDARY OF CONTAINMENT.

CUSTOMER NAME PRIME TURBINES

PURCHASE ORDER NO. P08495 ITEM NO. 001 PO NO. -

DRAWING/PART NO. 3024979PR REVISION B

PRECISION RINGS PART NO. - REVISION -

PRECISION RINGS, INC. CODE NO. 99121 QUANTITY SHIPPED 2 PCS

LOT NO. 11556-000 SERIAL NO. - DESCRIPTION RING, SEALING

MSB (MATERIAL REVIEW DOCUMENT WHEN APPLICABLE) -

MATERIAL (CHECK ONE) PWC ENGINE MODELS: PT6A-6, -11, -11AG, -15AG, -20, -21, -25, -25A, -27, -28, -110, -112

1.) - MATERIAL WAS FURNISHED BY CUSTOMER

2.) ✓ MATERIAL WAS FURNISHED BY PRECISION RINGS, INC.

MATERIAL SPECIFICATION AMS 5759 SPECIFICATION REVISION J

RAW MATERIAL HEAT NO. 203700 MATERIAL CONDITION HARDENED

SPECIAL PROCESS

PROCESS PERFORMED	SPECIFICATION	SPEC. REV.	SUPPLIER AND CODE
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

DATE SEPTEMBER 28, 1998 BY Thoy R. Edens SWORN TO BEFORE ME THIS

28TH DAY OF SEPTEMBER, 19 98 QUALITY CONTROL MANAGER MY COMMISSION EXPIRES AUGUST 27, 2001.

STATE OF INDIANA; COUNTY OF MARION Sandra K. Poremba
SANDRA K. POREMBA

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.

"EQUIPMENT CONTAINING MERCURY OR MERCURY COMPOUNDS HAS NOT BEEN USED FOR FABRICATION, PACKAGING, EXAMINATION OR TESTING OF PARTS, ASSEMBLIES OR MATERIAL SUPPLIED ON THIS ORDER."

1. UNITED STATES

2. **FAA FORM 8130-3****AIRWORTHINESS APPROVAL TAG**U.S. Department of Transportation
Federal Aviation Administration

3. System Tracking Ref. No.

S.O. 000387-02

4. Organization

Semco Instruments, Inc. 25702 Rye Canyon Road Valencia, Calif. 91355

5. Work Order, Contract, or Invoice Number:

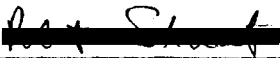

Invoice# 1310

6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
001	THERMOCOUPLE BUS BAR	3024120	VARIOUS	1	SN 4870	OVERHAULED

13. Remarks

See attached Analysis/Teardown Report

Reference Procedure RPS3024120*Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.*

14. New <input type="checkbox"/> Newly Overhauled <input type="checkbox"/> Certifies that the new or newly overhauled part(s) identified above, except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness. NOTE: In case of parts to be exported, the special requirements of the importing country have been met.		19. Return to Service in Accordance with FAR 43.9 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.	
15. Signature	16. FAA Authorization No.:	20. Authorized Signature: 	21. Certificate Number: 
17. Name (Typed or Printed):	18. Date:	22. Name (Typed or Printed): Robert S. Stewart	23. Date: 3-23-99

ACCESSORY COST ESTIMATE

S/N A2024

[illegible]

SHOP FINDINGS: DIAPHRAGM WAS BROKEN

ACCEPTANCE TEST RESULT

 * UNITED TURBINE CORP. *

TEST LOG PT6 - FORM NO. 513

CUSTOMER.....BANYAN
 JOB NUMBER.....1832
 ENGINE S/N.....22008
 ENGINE MODEL.....PT6A-20
 PERFORMANCE SB.....1094
 LHV OF FUEL.....18640
 TSG SAMPLE.....30
 SG SAMPLE.....8
 TTI FOR TS TRIM.....
 DEL TS (F).....

DATE OF TEST.....06-10-1999
 STARTING TIME.....09:33
 COMPLETION TIME.....11:01
 TOTAL TIME (MIN).....68

CT VANE CLASS.....
 PT VANE CLASS.....

ACCELERATION TIME.....
 TEST EVENTS.....3.4.6.12.13.
 MAX NG TRIM STOP.....
 TTI NG TRIM STOP.....

TTI LP SV CHECK.....
 NG LP SV CLOSURE.....
 TTI HP SV CHECK.....
 NG HP SV CLOSURE.....
 LP SV ORIFICE SIZE.....
 HP SV ORIFICE SIZE.....
 RUN DOWN TIME NG.....
 CORR TTS.....999
 CORR PS3.....999
 CORR NG.....999

TRIMMER P/R.....
 TRIMMER CMWS.....

RUN DOWN TIME NG.....
 CORR TTS.....999
 CORR PS3.....999

DESCRIPTION	NR	HF	TORQ	SNP	TWF	WF	TT1	TT5	TT7	TSQ	PS3	NGP	R6B	MOT	PA	DEL	VED	COMMENTS
6/1 FEATHER	52.8	13	14.46	84	100	99.3	1042	0			21	79	60	120	29.99	0	4.2	
6/1 UNFEATH	52.7	38.4	10.56	85	100	94.0	1051	0			21	69	61	120	30.00	10	5.3	
ACCEPTANCE	99.101	102.56	77.77	87	473	93.6	1377	0	707	138	75	56	152	30.00	1.1	1.2	TT1	
	97.787	102.21	72.16	87	355	95.1	1348	0	691	133	75	55	147	29.99	1.1	1.0		
	94.024	96.577	60.74	98	207	96.5	1272	0	662	117	75	57	151	30.00	.99	1.0		
	91.262	92.189	63.47	97	276	93.3	1222	0	629	107	74	57	148	30.00	.89	1.0		
ACCEPTANCE	36883		550		712		1765		731	6.1							NG TTS 3FC	
MAX CLIMB	36702		538		716		1756										SFC	
MAX CRUISE	36053		495		735		1723										SFC	
BATA PLATE S	35767		476														95.37% 45	
OWN LIMITS	36850		550		2.583		1766		2	1								

"The Aviation Professionals"

PART NUMBER	SERIAL NUMBER	DESCRIPTION	QUANTITY	WORK ORDER #	OPERATION NUMBER	NAME RE-ORDER
3009022		Cup washer	4	30763	307632	CS
AS3209-017		O ring	4	30763	2	CS
3005305		GASKET	43	30763	13/14	CS
3010671		GASKET washer	8	30763	9	CS
3010671		GASKET washer	5	30763	10	CS
T019551		CT VANES	8	30763	5/6	-
T023401		BLADES	116	30763	7/8	
3013511	2C714	CT DISK OHC	CUSTOMER		Reminded	
3013511	40B463	CT DISK NEW	1	30763	7	
3018240		Rivets	116		7/8	
AN123158		Rivet	9		7/8	
AN125403		Rivet	10		7/8	
3010117CL3		Weight	1		7	
3010117CL2		Weight	2		7/8	
3010117CL5		Weight	3		7/8	
3007422		Packing (V)	2		5/6	
3006317		Cord	8 FT		5/6	
T020485		Segments	26	30763	5/6	
3024120	8F104	Bushbar	1	30763	9	
3024120	4870	Bushbar	1	30763	10	
3024979	—	Seal Rings	2	30763	9/10	
T020484		Segments	2	30763	5/6	
3022983		Thermocouple	3 ?	30763	9/10	
3010671 30763 9/10						
2380		oil	?			

RECEIVING AND INSPECTION REPORT

DATE RECEIVED: _____

WORK ORDER #: 30763

CUSTOMER: _____

DATE: MAY 12, 1999

	ITEM NO	PART NUMBER	DESCRIPTION	SERIAL NO	QTY SHIP	QTY RECV	COND
L/H	1	3013411	CT Disk	7882		1	
R/H	2	3013511	CT DISK	1P576		1	
L/H	3	3017860	Clamp	N/A	:		
R/H	4	3023774	combustion liner	2241	:		
L/H	5	3010149	FUEL FLOW DIVIDER	019	1	1	SV
L/H	6	3010145	FUEL MANIFOLD	N/A	13	13	SV
R/H	7	3010149	FUEL FLOW DIVIDER	178	1	1	SV
R/H	8	3010145	FUEL MANIFOLD	N/A	13	13	SV
	9						
	10						

CONDITION CODE FOR PARTS: N-NEW S-SERVICEABLE R-REPAIRABLE C-CONDEMNED

REMARKS

REPAIR STATION: WD4R618M

PT6A PERFORMANCE RUN

A/C REG: N338AS
 A/C MODEL: King B-90
 A/C S/N: LS 493

DATE: 5/6/99
 TECHNICIAN: Jeff Chris
 ILS: 1325.5

INLET AIR TEMP: <u>A</u>	BARO. PRESS: <u>2992</u>	PRESS ALT: <u>Sea.</u>	O.A.T.: <u>34°C</u>
--------------------------	--------------------------	------------------------	---------------------

	LEFT ENGINE	RIGHT ENGINE
ENGINE MODEL	<u>PT6A 20</u>	<u>-20</u>
ENGINE S/N		
D.P.S. RPM		
D.P.S. %		

BLEED UNCLIPPED

STARTING TEMPERATURE	TARGET	LEFT ENGINE OBSERVED	RIGHT ENGINE OBSERVED
TORQUE (PSI/FT.LBS.)	<u>1210 / 1240</u>	<u>1210 / 1200</u>	<u>1240 / 1212</u>
ITT (C)	<u>720</u>	<u>725 / 720</u>	<u>725 / 720</u>
FUEL FLOW (PPH)	<u>332</u>	<u>355</u>	<u>345</u>
PROP RPM (N2) (RMP%)	<u>2000</u>	<u>2000</u>	<u>2000</u>
GAS GEN SPEED (N1) (%)	<u>L 95.2 R 97.3</u>	<u>96.0 (93.6 DPS)</u>	<u>97.5 (94.9 DPS)</u>
OIL PRESS (PSI)			
OIL TEMP (C)			

IDLE SPEED (N1%)		LOW 49.5	HIGH 70.5	LOW50.5	HIGH 71.8		
REVERSE %		N1 88.5	N2 1920	Tq 190	N1 88.5	N2 1950	Tq 100

FLIGHT IDLE TORQUE	<u>505 @ 2000</u>	<u>520</u>	<u>520</u>
MAX PROP RPM (RPM%)		<u>2170</u>	<u>2165</u>
PROP GOV CHECK			

- (1) L/H ITT IND STICKY 40°
- (2) L/H eng to 2170 (N2) 1210 (TQ) R/H 2165 (N2) GOOD (TQ)
- (3) PROP needs rigging IN Reverse
- (4) Feather Detent Left 1700 Right 1790



PT6A PERFORMANCE RUN

A/C REG: N338ASDATE: 6/2/99A/C MODEL: King Air B-90TECHNICIAN: JEFF CROTHEA/C S/N: LJ 493

FAX TO Billy CHAPMAN (404) 349-7810

INLET AIR TEMP: <u>0</u>	BARO. PRESS: <u>29.92</u>	PRESS ALT: <u>Sea</u>	O.A.T.: <u>34°C</u>
-----------------------------	------------------------------	--------------------------	------------------------

	LEFT ENGINE	RIGHT ENGINE
ENGINE MODEL	<u>PT6A-20</u>	<u>PT6A-20</u>
ENGINE S/N	<u>PCE-20801</u>	<u>PCE-22008</u>
D.P.S. RPM	<u>35,100</u>	<u>35,600</u>
D.P.S. %	<u>93.6</u>	<u>94.9</u>

STARTING TEMPERATURE	TARGET	LEFT ENGINE OBSERVED	RIGHT ENGINE OBSERVED
TORQUE (PSI/FT.LBS.)	<u>Left 1215 / Right 1250</u>	<u>1215</u>	<u>1060</u>
ITT (C)	<u>720</u>	<u>705</u>	<u>720</u>
FUEL FLOW (PPH)	<u>340</u>	<u>350</u>	<u>310</u>
PROP RPM (N2) (RMP%)	<u>2000</u>	<u>2000</u>	<u>2000</u>
GAS GEN SPEED (N1) (%)	<u>1.016</u> / <u>1.026</u>	<u>(97)</u>	<u>94</u>
OIL PRESS (PSI)	<u>95.09</u> / <u>97.3</u>		
OIL TEMP (C)			

IDLE SPEED (N1%)		LOW 52	HIGH 71	LOW 52	HIGH 70
REVERSE %		N1 NEEDS	N2 RIGGING	Tq	N1 N2 Tq

FLIGHT IDLE TORQUE	<u>565 @ 2000</u>	<u>520</u>	<u>520</u>
MAX PROP RPM (RPM%)	<u>2200</u>	<u>2170</u>	<u>2165</u>
PROP GOV CHECK			

ENGS HAVETT 24,709.20TC 60,125TBO .809



1575 West Commercial Blvd.
Fort Lauderdale Executive Airport
Florida 33309
(954) 491-3170 • FAX (954) 771-0281

PURCHASE ORDER

PAGE NUMBER 1
DOCUMENT NUMBER 80015040
DATE 5/13/99

V
E
N
D
O
R

239
AVIALL
ACCOUNT 05-106800
PO BOX 277302
ATLANTA

GA 30384-7302

S
H
I
P
T
O

85

TURBINE SERVICES PARTS
BANYAN AIR SERVICES INC
1575 W COMMERCIAL BLVD 31
FT LAUDERDALE FL 33309-3057

5/17 JT

V193629
check 6/9
V192505
5/21

king

DICE NUMBER:

1

ATUS/WORK

3ly Overhauled
7N 27700-1HL

TERMS	REFERENCE NUMBER	SHIP VIA	ORDER NO	ORDERED	REQUESTED	SHIPPED	CUSTOMER REPRESENTATIVE		FOB - DESTINATION	
	JAVID	UPS GROUND	80015040	5/13/99	5/14/99		RIFEC			
LN NO	ITEM NUMBER	ITEM DESCRIPTION	ITEM REFERENCE	QTY	PRICE PER	LIST	COST	LOCATION	QTY ORDERED	EXTEND. NET
1	27700-1	X FUEL NOZZLE TIP - EXCHANGE Job No.: 80/ 30763/ 3/0	5/17/99	1	Each	65.57	45.900	BD2	5/14 15.00	688.50
2	CORE-CHARGE	CORE CHARGE-FUEL NOZZLES Job No.: 80/ 30763/ 998/0		1	Each	.00	20.000		15.00	300.00
3	CORE-CREDIT	CORE CREDIT-FUEL NOZZLE Job No.: 80/ 30763/ 998/0		1	Each	.00	20.000		15.00	300.00
4	27700-1	C NOZZLE TIP Job No.: 80/ 30763/ 3/0	1 issued 'c' 5/17/99	1	Each	.00	.000	BD1	15.00	.00
** END OF PURCHASE ORDER **									TOTAL:	688.50
5/17/99 sent 'c' cores to Aviall w/sammy 5/18/99 23.50 1880										

5/17/99 sent 'c' cores to Aviall w/sammy 5/18/99 23.50 1880

The Aviation Professionals

Rose Gehling

January 20, 1999

with FAA
return to service.



WORK ORDER 32977

Date 5/13/99

Bill To: 10640

Banyan Air Service
1575 West Commercial Blvd
Hangar 31
Ft Lauderdale,, FL 33309

Ship To:

Banyan Air Service
1575 West Commercial Blvd
Hangar 31
Ft Lauderdale,, FL 33309

Customer P.O.
80015000

Ship-code Terms
FX Net 30

Item #	Description	Amount
1	Combustion Liner P/N 3023774 S/N 2241 Cracks & excessive patches in outer skin in cooling ring area. Replace cooling ring P/N 3023771. Regap rings. TPI per SPOP 62. Ref. OHM P/N 3011403.	1,200.00
2	Cooling ring P/N 3023771	785.00

Rough part -
looking at a

7-10 day turn time.
We may be able to better
that as we get into the
part.

Born

QUOTE APPROVED

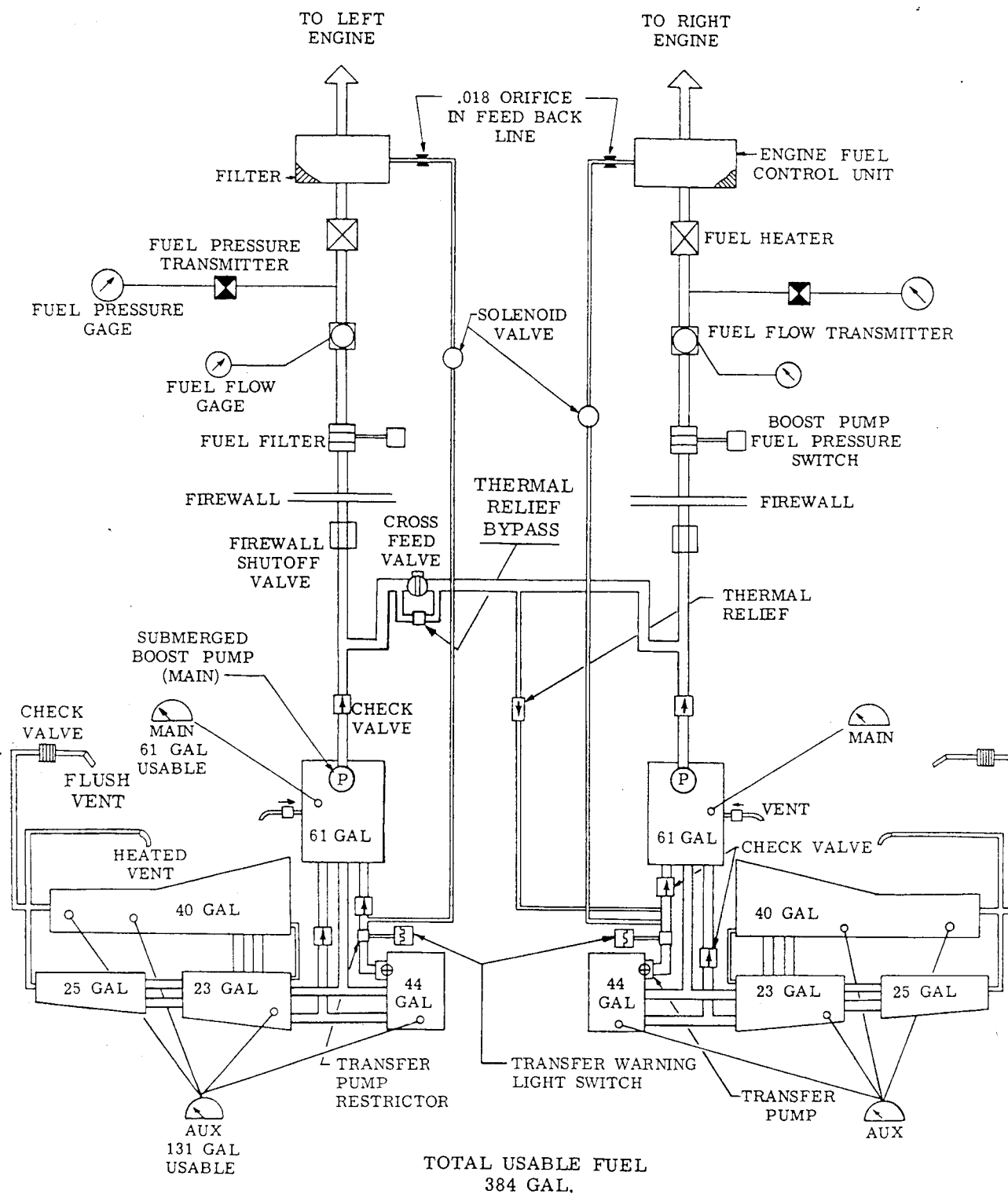
QUOTE DISAPPROVED

AUTHORIZED SIGNATURE

TOTAL DUE 1,985.00

APPENDIX D

SYSTEM DIAGRAMS



FUEL SYSTEM SCHEMATIC

If the transfer pump fails to operate during flight, gravity feed will take over its work. When the main tank level drops to approximately 3/8 full, the gravity feed port in the main tank opens and gravity flow from the wing tank starts. All wing fuel except 28 gallons from each wing will transfer during gravity feed. Whenever the left main tank supply drops to 10 gallons or less, fuel flow to the combustion heater shuts off.

The crossfeed system is controlled by a three position switch placarded: OPEN, CLOSED, and AUTO. The valve can be manually opened or closed, but under normal flight conditions it is left in the AUTO position. In this position, fuel pressure switches are connected into the crossfeed control circuit. These switches open the crossfeed valve automatically if boost pump failure causes a drop in line pressure. This allows the remaining boost pump to supply both engines with pressure during emergency operations.

If a boost pump fails after take-off, the crossfeed may be closed and engine operation continued on suction feed for a limited time. This type of operation is limited to 10 hours of operation between any overhaul or replacement period of the engine driven high pressure pump.

ELECTRICAL SYSTEM

The King Air is equipped with a 28-volt direct current (DC) electrical system. A 40-ampere/hour, 24-volt, nickel-cadmium battery, located in the right wing center section, provides current for starting and essential loads. It is directly connected to the bus which feeds essential loads, such as the fuel boost pumps. Isolation diodes and fuses provide circuit protection. The fuses are located in the underside of the right center section, just forward of the battery. The diodes, are solid state electronic devices that isolate parts of the system by permitting current flow in one direction only.

A battery relay, controlled by a cockpit switch, connects the battery to the battery bus. Isolation diodes permit the battery relay to be energized by external

power or generators in the event that the battery charge is insufficient to activate the relay. A normal system potential of $28.25 \pm .25$ volts maintains the battery at full charge.

During engine starts, the battery bus is connected directly to the starter/generator by the starter relay. The starter/generator drives the compressor section of the engine through accessory gearing. The starter/generator initially draws approximately 700 amperes and then drops rapidly to about 300 amperes as the engine obtains 20 percent gas generator speed.

When operated as generators, the two starter/generators provide a capability of 200 amperes each at 28.25 volts. Paralleling circuitry and solid state regulators control the operation of the generators. Overvoltage protection is provided by relays that interrupt the generator field current to remove a defective generator circuit from service. Reverse current protection is provided by diodes. The generators are self-exciting and do not require the battery to start generator operation.

Each generator is connected to its respective main bus (see Electrical System Schematic). The main buses are tied together and to the battery bus through 325 ampere current limiters (fuses). These limiters protect each generator and the battery from a short circuit on the other generator's main bus. Since such a short would preclude returning the bus to service, no provisions are made for replacing the limiters in flight. However, the system is designed so that most loads can be supplied from the remaining main bus. The condition of the limiters can be checked by observing operation of the inverters with the battery switch on and generators off. If both inverters operate, both current limiters must be good.

Each main bus supplies two subpanel buses through 50-ampere feeder circuit breakers and isolation diodes. Thus, both subpanel buses can be powered by either generator. The number one feeder breakers also supply power for essential bus loads through individual isolation diodes. This provides for operation in the

APPENDIX E

POWERPLANT TEARDOWN

See P&W teardown report, and attachment to the factual report.

APPENDIX F
PHOTOGRAPHS



1. TOP LEFT BUILDING DAMAGE



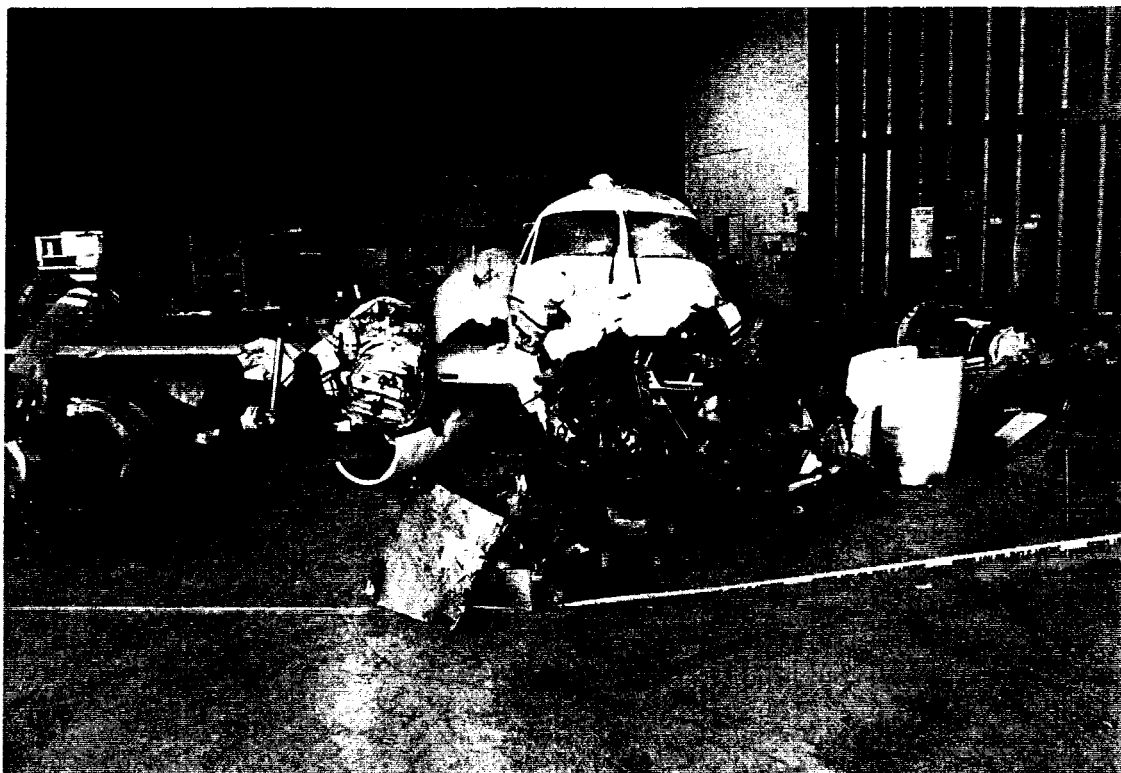
2. TOP OF BUILDING



3. AIRCRAFT FUSELAGE



4. LEFT WING



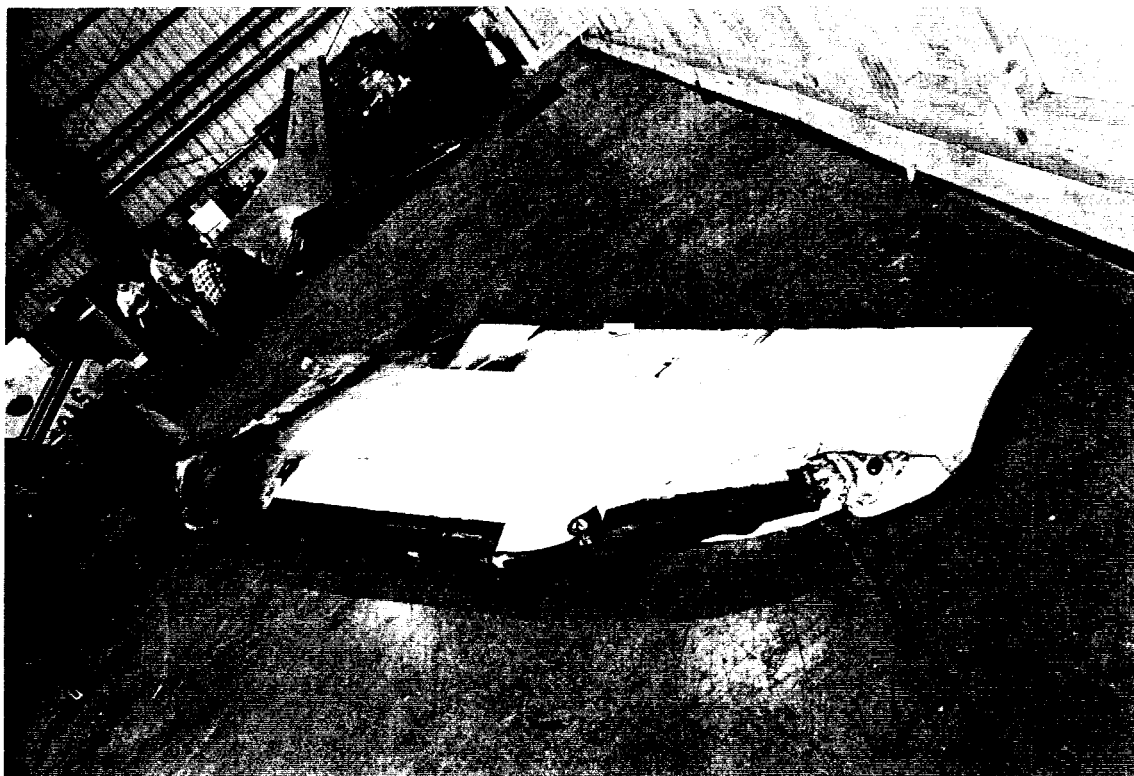
5. AIRCRAFT IN HANGAR



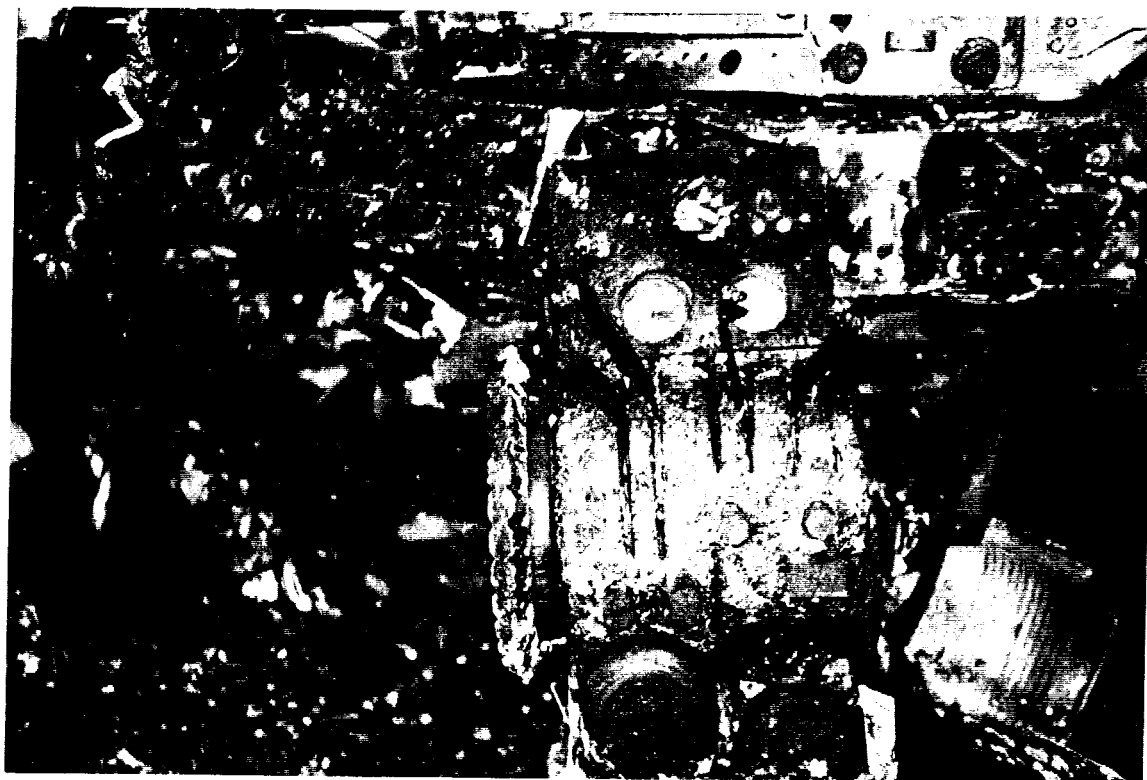
6. RIGHT WING AND FUSELAGE



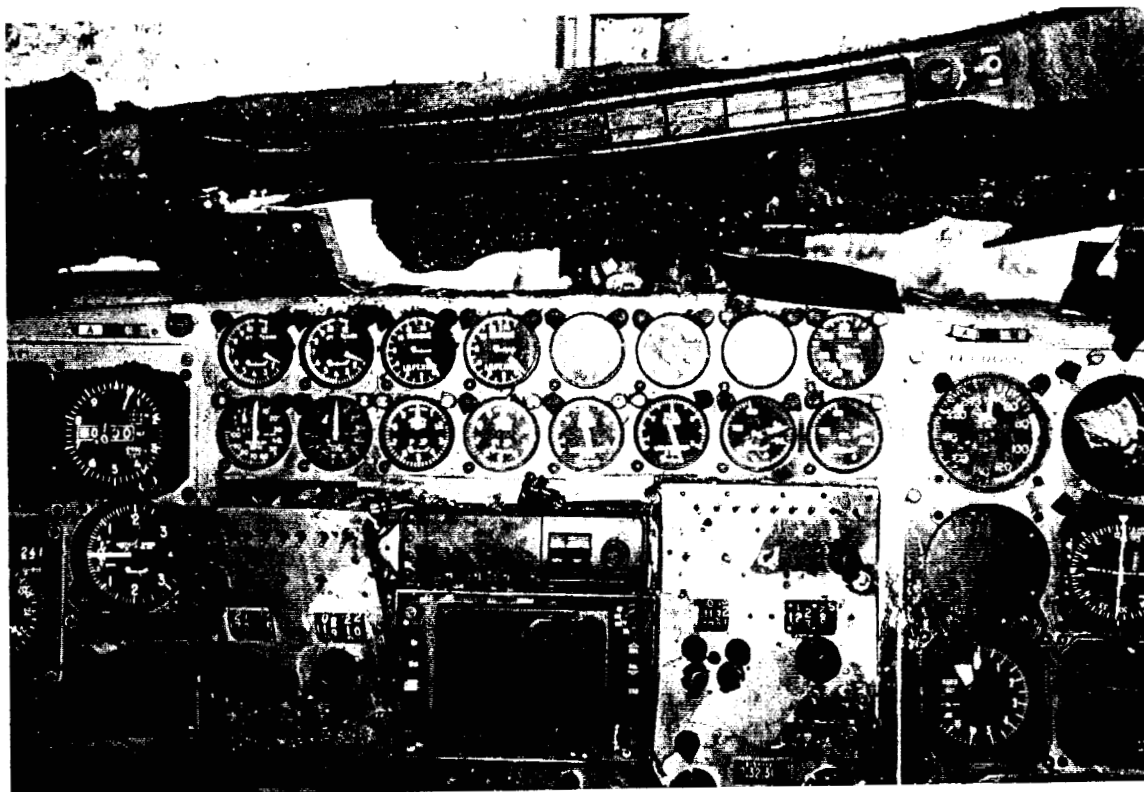
7. RIGHT WINGTIP



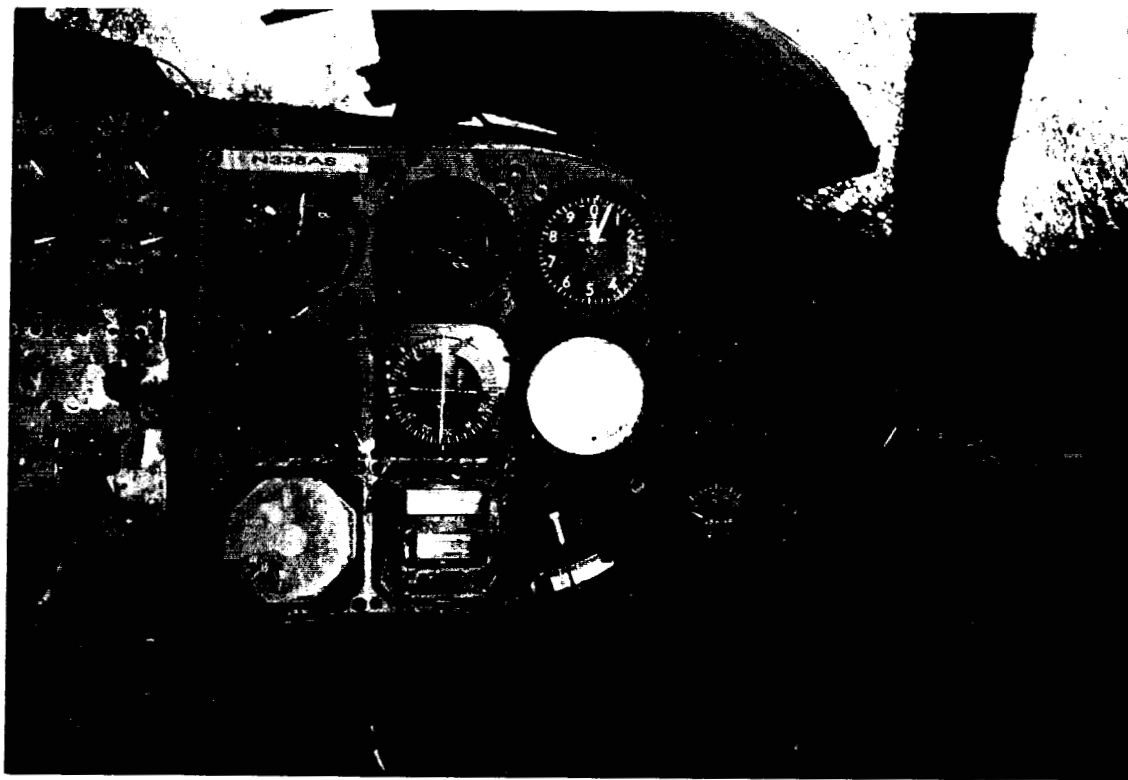
8. LEFT WINGTIP



9. ENGINE CONTROLS

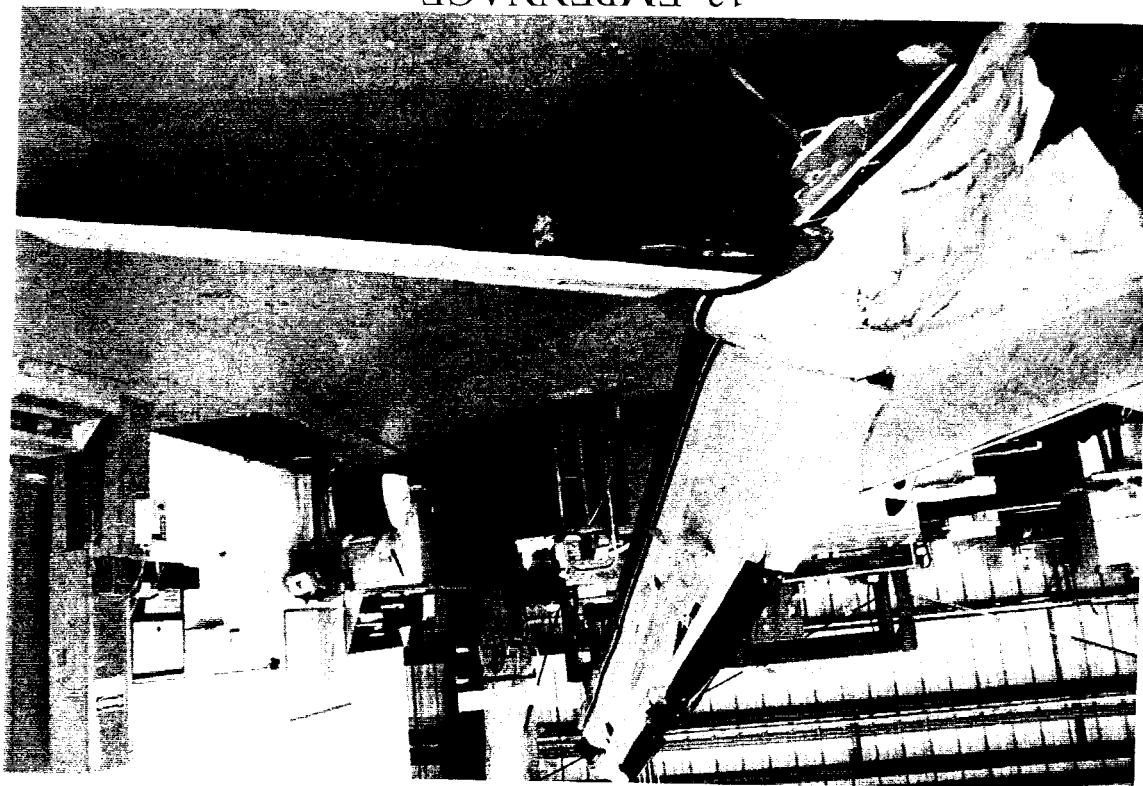


10.ENGINE INSTRUMENTS

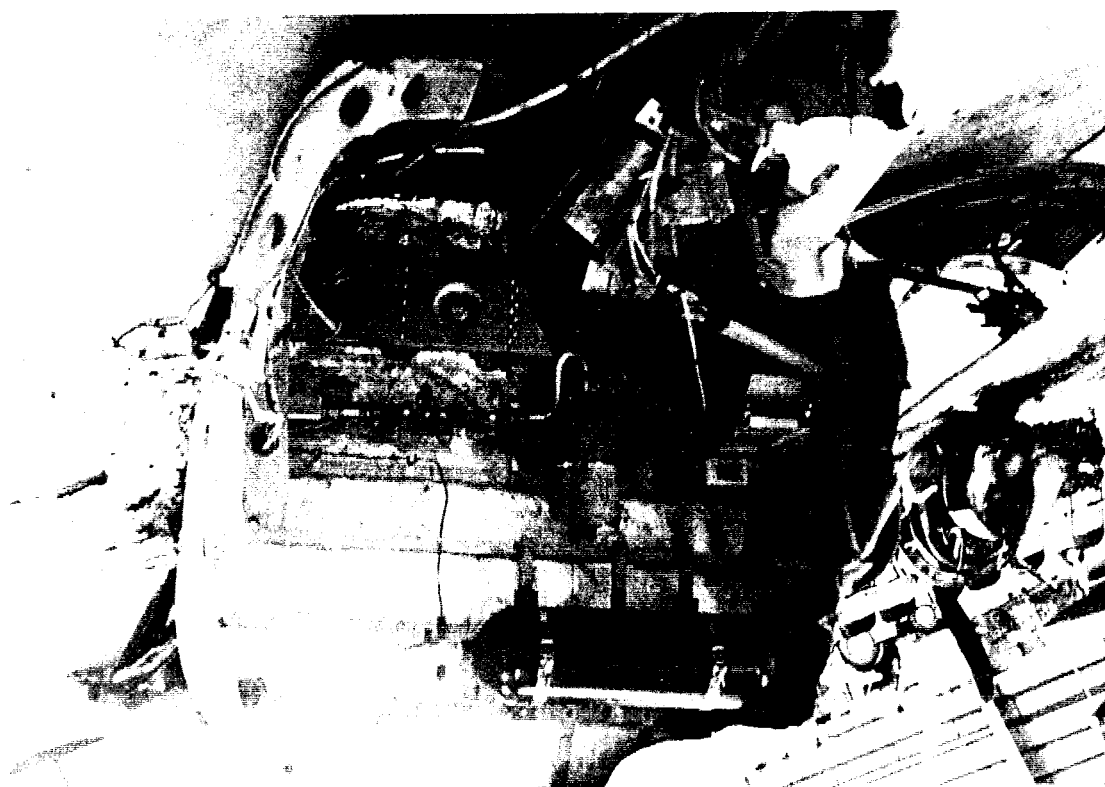


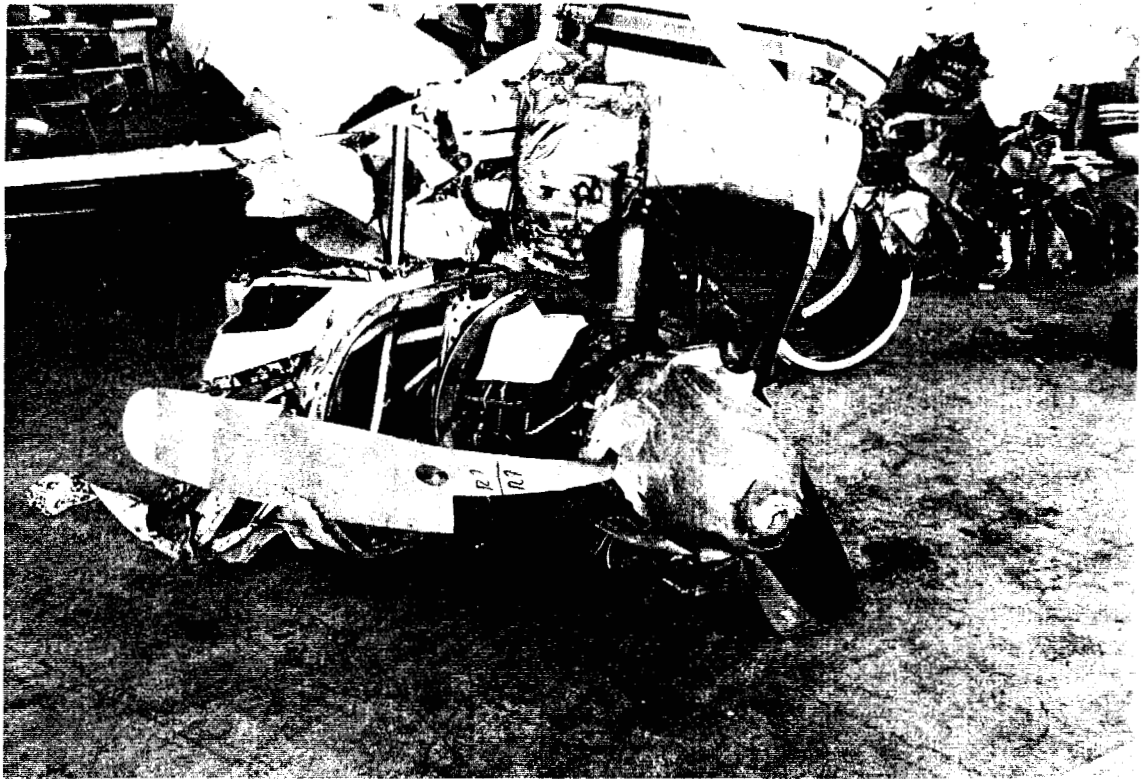
11. CO-PILOT'S FLIGHT INSTRUMENTS

13. EMPENNAGE



12. AFT PRESSURE BULKHEAD





14. RIGHT ENGINE AND PROPELLER



15. LEFT ENGINE AND PROPELLER